



Testing. Development. Problem Solving

January 4, 2024

Mr. Phillip Rakhunov
Pollack Solomon Duffy LLP
31 St. James Avenue, Suite 940
Boston, MA 02116

Re: Kitchen Winners NY Inc. v. Rock Fintek LLC
Case Number: 1:22-cv-05276-PAE

Dear Mr. Rakhunov:

Background

My employer, Akron Rubber Development Laboratory, was retained by Pollack Solomon Duffy LLP on behalf of Rock Fintek to perform testing on gloves related to the above captioned matter. In addition, I was asked to comment on previous ARDL projects that also involved gloves related to the Kitchen Winners NY Inc. v. Rock Fintek LLC matter.

Qualifications to Opine on this Matter

I am a Ph.D. degreed chemist with over 30 years of experience in the rubber industry. I am a named coauthor on 31 United States patents and multiple international patents related to rubber technology. My CV is attached. My most relevant experience to this matter as detailed on my CV was my time at Ansell Healthcare where I designed and developed nitrile gloves. My time as Director-Compound Development and Laboratories at Bridgestone where I was responsible for North and South American laboratory testing of rubber physical and chemical properties is also relevant.

Current investigation (ARDL Project Number 172615)

For the current investigation, ARDL received 28 boxes (two boxes from 14 unique lots) of unopened gloves labeled "Medcare". The term "nitrile" appeared on all 28 boxes. One box from each of the 14 unique lots was submitted for the following analytical tests (ARDL Project Number 172615):

- ASTM D 3677 Polymer Identification by Fourier Transform Infrared Spectroscopy (FT-IR)
- Total Nitrogen: LECO Method
- ASTM D 6319 Standard Specification for Nitrile Examination Gloves for Medical Applications

At the time this document was submitted (January 4, 2024), the results for Total Nitrogen: LECO Method were available. ASTM D 3677 and ASTM D 6219 testing will be completed by January

1, 2024. I reserve the right to modify and/or augment my opinions based on the ASTM D 3677 and ASTM D 6319 results.

Results and Discussion

The crux of the current matter is the identity of the polymer used to produce various gloves labeled “nitrile”. The term “nitrile” is a shortened version of “poly-butadiene acrylonitrile” which refers to a polymer made by combining two monomers: butadiene and acrylonitrile. Both monomers are shown in Figure 1.

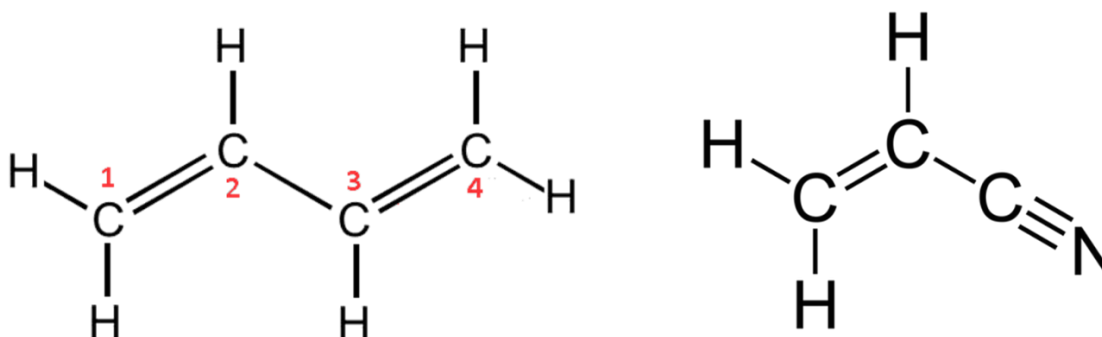


Figure 1 - Butadiene monomer (left) and acrylonitrile monomer (right)

The copolymer resulting from the combination of the two monomers shown in Figure 1 typically contains ~33% acrylonitrile and ~67% butadiene. Increasing amounts of acrylonitrile improve the chemical resistance of the resulting copolymer. However, increasing amounts of acrylonitrile have a negative impact on low temperature performance in that higher amounts of acrylonitrile result in a stiffer, less flexible material in low temperature conditions.

Note the presence of nitrogen (N) in the acrylonitrile monomer

For the purposes of this discussion, it is useful to introduce the concept of “vinyl” rubber. The term “vinyl” is a shortened version of “polyvinylchloride” which is a polymer made from vinyl chloride monomer. Vinyl chloride monomer is shown in Figure 2.

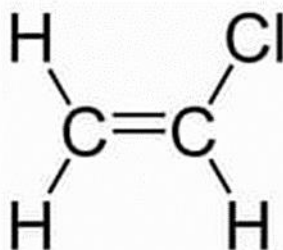


Figure 2 - Vinyl chloride monomer

Note that unlike butadiene monomer and acrylonitrile monomer, the vinyl chloride monomer contains chlorine (Cl) but does not contain nitrogen (N). Polyvinylchloride is typically a hard plastic commonly used to make rigid pipes. However, polyvinylchloride can be made elastomeric, rubbery and flexible with the addition of materials known as plasticizers. Polyvinylchloride + plasticizers is typically referred to as “vinyl rubber”.

Because the acrylonitrile monomer contains nitrogen, testing for total nitrogen content is a valuable analytical tool to confirm the presence of nitrile rubber. Total Nitrogen: LECO Method results for the current matter (ARDL Project Number 172615 are shown below.

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO_x. The NO_x gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO_x gas was measured by thermal conductivity and the final result was calculated by the LECO microprocessor as a weight percent of Nitrogen.

SAMPLE	Lot Number	TOTAL NITROGEN, %
1	T202104	ND
2	No lot number	ND
3	HFK-2021050102	ND
5	MEDCARE202101	ND
7	ZKMD01202101	ND
11	MED202011	ND
12	MED202102	ND
13	MED202102	ND
14	MED202101	ND
15	20201106	ND
19	MEDCARE202103	ND
23	QDMD01202002	ND
24	T4	ND
25	HFK-202103010101	ND

Note: Results are an average of triplicate runs.

ND = Not Detectable, Limit of Detection = 0.04% nitrogen which corresponds to 0.4588% nitrile rubber (33% acrylonitrile)

It is instructive to refer back to the monomers shown in Figures 1 and 2 in order to understand the significance of the Total Nitrogen results. As previously noted, nitrile rubber contains ~33% of acrylonitrile monomer which contains nitrogen. Therefore, a glove made from nitrile rubber would be expected to contain a detectable amount of nitrogen. If a glove does not show a detectable amount of nitrogen, the glove cannot contain a detectable amount of nitrile rubber.

To illustrate this conclusion, test results from a portion of ARDL Project Number 162931 are reproduced below. This particular glove sample tested as part of ARDL Project Number 162931 was a confirmed nitrile rubber glove that is not related to Kitchen Winners NY Inc. v. Rock Fintek LLC. The complete report is contained as an appendix to this document.

POLYMER IDENTIFICATION; ASTM E1252

Instrument: Perkin-Elmer Infrared Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Pyrolysis, Hotmelt

TABLE 1 – POLYMER IDENTIFICATION

SAMPLE ID	POLYMER
2 Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves Lot ZYMD01202103	Acrylonitrile Butadiene Rubber

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO₂. The NO₂ gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO₂ gas was measured by thermal conductivity and the final results was calculated by the LECO microprocessor as a weight percent of Nitrogen.

TABLE 2 - TOTAL NITROGEN

SAMPLE ID	TOTAL NITROGEN, %
2 Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves Lot ZYMD01202103	6.93

Note: Results are an average of triplicate runs.

The identity of the polymer used to make the glove was confirmed to be polyacrylonitrile butadiene (which is synonymous with “nitrile rubber” and “Acrylonitrile Butadiene Rubber” as shown above). As expected, the glove made from polyacrylonitrile butadiene shows a detectable amount of nitrogen (6.93%).

Based on the absence of a detectable amount of nitrogen in the 14 lots of gloves tested under ARDL Project Number 172615, it can be definitively concluded that these gloves do not contain a detectable amount of nitrile rubber. This conclusion is supported by the results of Polymer Identification by Fourier Transform Infrared Spectroscopy.

POLYMER IDENTIFICATION; ASTM E 1252

Instrument: Perkin-Elmer Frontier Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Film, Pyrolysis

TABLE 1: POLYMER IDENTIFICATION

SAMPLE ID	POLYMER
#1, 2, 3, 5, 7, 11, 12, 13, 14, 15, 19, 23, 24, 25 (all)	Polyvinyl Chloride

The polymer identified in all samples tested was polyvinyl chloride. Nitrile rubber was not detected in any of the samples analyzed.

Please note that the original protocol and quotation called for “ASTM D 3677 Polymer Identification by Fourier Transform Infrared Spectroscopy (FT-IR)”. The specific method of ASTM D 3677 is suitable for samples containing rubber. The polymer polyvinyl chloride is

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more accurately characterized as a plastic and therefore not suitable for reporting according to ASTM D 3677. Therefore, the more general method of ASTM E 1252 was reported as the method used.

The properties of the fourteen boxes were tested according to ASTM D 6319 Standard Specification for Nitrile Examination Gloves for Medical Applications. Results are shown below.

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 1

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	19.4	8.5	345	8.8	17.3
	18.7	7.7	348	8.4	16.6
	21.1	8.2	367	9.0	17.6
	20.3	8.8	368	8.5	16.9
	20.2	8.2	317	9.7	19.1
	19.3	7.5	312	9.3	18.6
	20.2	8.6	349	9.1	17.8
	20.4	8.7	359	8.7	17.5
	20.0	7.6	279	10.7	--
	20.8	8.3	329	9.7	19.1
	19.1	7.8	314	9.2	18.2
	19.5	8.0	296	10.0	--
	19.3	7.7	318	9.2	18.3
Median	20.0	8.2	329	9.2	17.8
Std. Deviation	0.7	0.4	27.7	0.7	0.8
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 2

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	15.4	6.8	305	7.0	15.2
	16.9	7.0	354	6.9	14.4
	16.7	6.5	358	6.9	14.2
	15.8	6.8	345	6.8	13.9
	12.3	5.0	284	6.3	--
	12.7	4.9	280	6.4	--
	12.2	5.2	274	6.3	--
	16.8	7.1	382	6.5	13.4
	18.8	7.2	397	6.8	14.2
	16.7	6.7	374	6.6	13.7
	18.3	7.4	387	6.7	14.4
	16.6	6.9	317	7.5	15.5
	17.0	6.8	357	6.9	14.4
Median	16.7	6.8	354	6.8	14.2
Std. Deviation	2.2	0.9	42.9	0.3	2.6
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Fail	--	Fail	--	--

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ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 3

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	17.4	8.0	358	7.3	15.0
	18.8	8.1	384	7.3	15.4
	18.3	7.8	351	8.1	16.3
	23.5	9.1	371	9.7	19.5
	21.4	8.4	393	8.2	17.1
	22.2	8.6	389	8.7	17.7
	20.6	9.3	366	8.3	17.1
	18.5	7.6	309	8.9	18.1
	19.5	8.4	369	8.0	16.4
	19.0	8.0	408	7.0	14.6
	21.3	8.7	356	8.9	18.4
	17.9	7.8	357	7.4	15.6
	19.8	8.8	375	8.1	16.3
Median	19.5	8.4	369	8.1	16.4
Std. Deviation	1.8	0.5	24.5	0.8	1.4
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 5

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.4	7.1	343	9.4	18.2
	17.5	6.4	342	7.8	15.6
	17.2	6.96	341	7.9	15.4
	19.2	7.2	381	8.4	15.9
	15.9	5.6	263	8.9	--
	19.4	7.4	403	7.7	15.0
	18.9	7.2	287	9.6	--
	20.3	7.5	354	8.8	17.4
	18.7	7.1	324	8.5	17.3
	19.1	6.8	311	9.3	18.5
	18.0	6.6	316	8.6	17.1
	18.8	6.6	282	10.1	--
	18.6	7.2	276	9.8	--
Median	18.8	7.1	324	8.8	17.1
Std. Deviation	1.2	0.5	41.6	0.8	1.3
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 7

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	18.1	7.3	281	8.8	--
	10.3	3.7	135	8.8	--
	21.7	9.0	310	9.4	20.6
	20.4	7.9	327	8.7	18.8
	18.7	7.5	319	8.2	17.4
	16.1	7.2	295	7.5	--
	18.1	6.8	334	7.8	16.5
	21.4	7.6	353	8.7	18.3
	16.9	7.5	328	7.2	15.5
	17.1	7.2	325	7.5	15.8
	18.0	7.4	362	7.2	15.2
	18.3	7.7	319	8.1	17.3
	17.3	7.5	341	7.2	15.2
Median	18.1	7.5	325	8.1	16.9
Std. Deviation	2.8	1.2	56.7	0.8	1.8
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 11

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	15.9	6.2	329	7.3	14.7
	18.1	6.9	341	8.1	16.1
	16.5	6.6	339	7.3	14.8
	17.2	6.7	309	8.3	16.8
	16.6	6.6	351	7.4	14.6
	17.5	6.7	350	7.8	15.5
	13.0	4.7	191	9.1	--
	17.5	7.0	411	6.7	13.3
	15.7	6.2	308	8.0	15.4
	20.6	6.8	347	9.1	18.0
	16.3	6.2	361	7.1	13.8
	17.4	6.6	314	8.4	16.6
Median	16.9	6.6	340	7.9	15.4
Std. Deviation	1.8	0.6	51.7	0.8	1.4
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 12

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	16.5	6.7	239	9.7	--
	21.1	7.6	348	9.5	18.5
	19.1	7.3	307	9.8	18.8
	18.0	7.0	290	9.3	--
	19.3	7.1	303	9.7	19.0
	19.4	7.5	316	9.3	18.3
	23.1	8.2	373	9.7	19.0
	18.4	8.2	340	8.4	16.5
	20.4	8.2	315	9.9	19.6
	18.9	7.6	303	9.4	18.7
	16.3	6.3	262	9.2	--
	15.3	6.1	295	7.9	--
	17.3	6.9	275	9.5	--
Median	18.9	7.3	303	9.5	18.7
Std. Deviation	2.1	0.7	35.6	0.6	1.5
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

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ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 13

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	15.1	5.8	226	9.2	--
	19.1	7.9	310	9.4	18.5
	17.7	7.6	314	8.6	17.0
	19.4	8.3	310	9.3	18.7
	21.4	7.8	303	10.7	21.1
	23.3	8.6	304	11.4	22.8
	22.7	8.1	275	12.0	--
	17.6	7.5	300	8.7	17.6
	17.7	7.4	275	9.5	--
	16.8	7.3	268	9.1	--
	14.9	5.7	231	9.2	--
	22.1	8.4	264	12.1	--
	15.3	6.3	309	7.1	14.9
Median	17.7	7.6	300	9.3	18.1
Std. Deviation	2.9	0.9	30.2	1.4	6.7
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 14

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	18.2	7.3	342	8.2	16.3
	19.5	7.7	364	8.3	16.3
	17.6	6.9	302	8.6	17.3
	20.1	6.9	344	9.0	18.0
	20.8	7.0	346	9.1	18.1
	18.1	7.2	375	7.4	15.0
	15.0	5.9	322	7.3	14.2
	17.7	7.1	364	7.6	14.9
	15.5	5.9	283	8.1	--
	17.5	6.8	340	8.0	15.8
	18.4	7.1	385	7.4	14.7
	17.7	6.3	290	9.2	--
	18.7	7.5	346	8.3	16.4
Median	18.1	7.0	344	8.2	16.0
Std. Deviation	1.6	0.5	31.7	0.6	2.0
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass		Fail		--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 15

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	17.2	7.3	293	8.8	--
	18.0	7.5	322	8.3	16.8
	17.0	7.0	309	8.3	16.6
	16.3	6.3	300	8.1	16.3
	15.7	6.5	303	7.5	15.5
	16.2	6.0	274	8.5	--
	18.7	7.2	381	7.5	15.1
	16.7	6.8	334	7.4	15.0
	16.8	6.6	285	8.6	--
	17.2	7.2	321	8.0	16.2
	18.7	7.5	336	8.4	16.8
	15.9	6.2	274	8.5	--
	18.7	7.5	364	7.8	15.8
Median	17.0	7.0	309	8.3	15.8
Std. Deviation	1.0	0.5	32.8	0.5	3.5
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 19

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.6	7.3	325	9.0	19.0
	18.1	7.0	298	8.7	--
	17.5	6.9	268	9.1	--
	21.7	7.6	297	10.4	--
	14.1	4.5	191	9.6	--
	19.4	8.1	364	7.8	16.1
	26.3	8.0	332	10.3	23.9
	19.2	7.3	340	8.2	16.9
	15.8	6.5	278	7.9	--
	20.9	6.9	275	10.7	--
	21.0	7.5	321	9.3	19.5
	20.2	8.5	416	7.2	15.0
	18.5	7.3	301	8.6	18.4
Median	19.4	7.3	301	9.0	17.8
Std. Deviation	3.0	1.0	53.5	1.1	5.9
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 23

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.6	7.2	322	9.9	19.5
	20.0	7.1	310	9.9	19.5
	21.2	7.0	292	10.8	--
	20.3	8.1	347	9.2	18.0
	21.3	7.4	343	9.4	19.0
	21.7	8.0	388	8.9	17.5
	19.9	7.5	395	7.9	15.9
	21.8	7.4	263	12.1	--
	16.4	5.6	199	11.2	--
	20.1	7.4	329	9.4	18.5
	22.8	8.5	400	9.1	17.5
	15.7	5.9	269	8.6	--
	18.6	7.43	324	8.7	17.5
Median	20.3	7.4	324	9.4	17.8
Std. Deviation	2.1	0.8	57.4	1.2	4.1
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 24

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	23.1	9.7	381	9.9	18.7
	20.8	9.8	357	9.5	18.1
	20.5	9.8	322	9.9	19.1
	21.1	9.5	405	8.5	16.4
	20.9	9.4	332	10.0	19.0
	21.0	9.1	359	9.3	17.9
	20.6	9.6	346	9.5	18.2
	20.2	8.9	377	8.6	16.5
	19.2	7.8	302	9.9	18.9
	20.7	8.8	247	12.3	--
	16.1	6.9	225	10.3	--
	18.9	8.3	294	9.9	--
	19.1	8.9	298	10.1	--
Median	20.6	9.1	332	9.9	18.2
Std. Deviation	1.6	0.9	52.5	0.9	1.0
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min

AQL 4.0

Accept 1

Reject 2

Sample 25

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	16.3	6.4	365	6.6	13.8
	17.5	7.9	392	6.6	13.6
	15.2	6.1	265	7.8	--
	17.8	7.2	350	7.1	15.3
	19.0	7.1	305	8.6	18.8
	20.3	7.5	331	8.5	18.3
	18.3	7.8	365	7.2	15.2
	17.8	7.9	351	7.2	15.2
	17.0	8.4	346	6.9	14.8
	21.2	7.9	490	6.3	13.4
	22.0	7.0	306	9.9	21.2
	18.6	7.4	350	7.5	16.0
	19.7	7.7	351	7.8	16.7
Median	18.3	7.5	350	7.2	15.2
Std. Deviation	1.9	0.6	52.6	1.0	4.0
Requirements	14 min.	--	500 min.	--	--
Pass/Fail	Pass	--	Fail	--	--

All lots fail to meet the specification for % elongation for nitrile examination gloves for medical applications. One lot also failed to meet the specification for tensile strength for nitrile examination gloves for medical applications. The below spec % elongation will result in the gloves tearing much more easily during donning.

As mentioned in the introduction to this document, I was asked to review previous ARDL projects involving gloves submitted by Rock Fintek and Ascension Health Resource & Supply Management Group, LLC. These gloves were also labeled as "MEDCARE nitrile". The key conclusion from the previous ARDL projects detailed in the appendix is that, other than the confirmed nitrile glove whose test results are discussed above, all glove samples labeled as "nitrile" were in fact vinyl rubber. The absence of nitrile rubber is confirmed by the FT-IR Polymer Identification results and further bolstered by the absence of detectable nitrogen in the Total Nitrogen: LECO Method results. A portion of ARDL Project Number 162931 highlighting this point is reproduced below.

RECEIVED: Sample identified as; Eight (8) Nitra Force Medicare Glove Types

- 1- Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101
- 2- 3-Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot T4
- 3- Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot MEDCARE202101
- 4- Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102
- 5- Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002
- 6- Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102
- 7- Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106
- 8- Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012

Decision Rule 1

POLYMER IDENTIFICATION: ASTM E1252

Instrument: Perkin-Elmer Infrared Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Pyrolysis, Hotmelt

TABLE 1 – POLYMER IDENTIFICATION

<u>SAMPLE ID</u>	<u>POLYMER</u>
1-Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101	Polyvinyl Chloride
2 Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Glove Lot T4	Polyvinyl Chloride
3 Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot MEDCARE202101	Polyvinyl Chloride
4 Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102	Polyvinyl Chloride

TABLE 1 – POLYMER IDENTIFICATION,continued

SAMPLE ID	POLYMER
5 Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002	Polyvinyl Chloride
6 Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102	Polyvinyl Chloride
7 Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106	Polyvinyl Chloride
8 Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012	Polyvinyl Chloride

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO₂. The NO₂ gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO₂ gas was measured by thermal conductivity and the final results was calculated by the LECO microprocessor as a weight percent of Nitrogen.

TABLE 2 - TOTAL NITROGEN

SAMPLE ID	TOTAL NITROGEN, %
1-Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101	ND
2 Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Glove Lot T4	ND
3 Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot EDCARE202101	ND
4 Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102	ND
5 Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002	ND
6 Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102	ND
7 Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106	ND
8 Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012	ND

Note: Results are an average of triplicate runs.

Of the eight samples tested in ARDL Project Number 162931, please note the following four lot numbers that were confirmed to be vinyl rubber and not nitrile rubber

HFK-202103010101 (sample 1)
HFK-2021050102 (sample 4)
MED202101 (sample 3)
MED202102 (sample 6)

The four lot numbers above were also submitted for ASTM D 6319 Standard Specification for Nitrile Examination Gloves for Medical Applications (ARDL Project Number 161525). Results for the four lot numbers listed above are reproduced below.

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #HFK-202103010101

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.0	8.8	286	10.2	-
	16.2	6.8	264	8.9	-
	13.7	6.1	212	8.5	-
	22.5	9.4	331	10.2	20.6
	17.6	8.0	315	8.4	16.8
	18.7	8.1	347	8.2	16.4
	16.7	7.2	307	7.9	16.3
	17.0	7.2	296	8.3	-
	18.2	8.0	311	8.4	17.7
	15.7	6.6	286	7.8	-
	15.0	5.9	261	8.2	-
	22.3	9.3	276	11.6	-
	13.0	5.7	213	8.0	-
Median	17.0	7.2	286	8.4	16.8
Std. Deviation	2.9	1.3	40.5	1.1	1.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

*ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. **NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.***

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #MED202101

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	18.4	7.4	316	9.1	17.7
	19.4	7.6	329	9.0	17.8
	20.0	7.9	307	9.9	19.4
	18.4	7.6	326	8.7	17.2
	20.3	7.7	315	9.6	18.9
	18.4	7.1	283	9.7	-
	18.7	7.4	289	9.6	-
	18.6	7.5	282	9.9	-
	20.3	7.7	296	10.4	-
	18.8	7.6	293	9.7	-
	19.0	7.5	303	9.5	18.7
	11.8	4.2	129	10.3	-
Median	18.8	7.6	303	9.6	17.8
Std. Deviation	2.2	0.9	52	0.5	0.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Pass	-	Fail	-	-

*ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. **NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.***

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #HFK-2021050102

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	11.7	5.2	148	9.2	-
	20.6	8.7	368	8.2	17.0
	20.9	8.9	310	9.8	20.3
	22.5	9.7	382	8.8	17.7
	21.7	8.8	339	9.6	19.8
	20.9	8.4	349	9.0	18.4
	17.3	7.2	305	8.4	17.3
	20.0	8.0	313	9.5	19.4
	11.3	4.6	144	9.2	-
	21.3	8.0	322	9.9	20.1
	20.9	9.0	368	8.6	17.4
	19.5	8.1	290	10.0	-
	21.9	8.6	382	8.7	17.9
Median	20.9	8.4	322	9.2	18.1
Std. Deviation	3.7	1.5	78	0.6	1.2
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

*ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. **NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.***

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #MED202102

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.1	8.8	350	8.9	17.9
	20.3	8.4	331	9.7	18.7
	20.2	9.0	315	10.0	19.5
	20.1	9.4	308	10.2	19.6
	19.8	8.2	329	9.4	18.3
	18.1	7.7	296	9.4	-
	20.2	8.3	292	10.6	-
	20.5	8.7	338	9.5	18.3
	19.9	8.1	299	10.3	19.8
	19.8	8.4	320	9.6	18.7
	20.5	8.5	323	9.8	19.0
	18.1	7.7	304	9.2	17.9
	20.2	8.5	362	8.8	17.2
Median	20.1	8.4	320	9.6	18.7
Std. Deviation	0.8	0.4	21.1	0.6	0.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Pass	-	Fail	-	-

Of the four lots mentioned previously, two lots (HFK-202103010101 and HFK-2021050102) fail to meet the requirement for Tensile Strength. All four lots fail to meet the requirement for elongation %

To be clear, testing according to ASTM D 6319 and ASTM D 3677 for the 14 lots submitted under ARDL Project Number 172615 is still in progress at the time this document was submitted (January 4, 2024).

In conclusion, ARDL has analyzed multiple lots of gloves labeled "nitrile" and found them to be in fact vinyl rubber. The assignment of polymer type based on FT-IR analysis is extremely accurate and differentiation between nitrile rubber and vinyl rubber is unequivocal by this method. The absence of detectable nitrogen also confirms that the gloves in question do not contain a detectable amount nitrile rubber.

Compared to nitrile rubber, gloves made from vinyl rubber are unsuitable for use in medical applications due to their inferior physical properties as shown in ASTM D 6319 testing as well as their inferior chemical resistance to materials commonly found in a medical environment such as alcohols and hazardous drugs.

ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. **NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.**

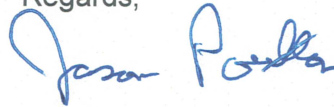
Mr. Phillip Rakhunov

Page 25

January 4, 2024

I reserve the right to modify or augment my opinions as new information becomes available.

Regards,

A handwritten signature in blue ink, appearing to read "Jason Poulton".

Jason T. Poulton, Ph.D.
Sr. Technical Advisor

Jason T. Poulton, Ph.D.
Senior Technical Advisor
Akron Rubber Development Laboratory, Inc.
Akron, Ohio

Jan. 2018	- To Present	<u>Senior Technical Advisor</u> , Akron Rubber Development Laboratory, Inc. with responsibilities for failure analysis and reverse engineering/formula reconstruction.
March 2016	- Jan. 2018	<u>Independent Consultant</u> , provided insight and guidance on a variety of tire and rubber topics such as evaluation/selection of raw materials, development/scale up of polymers, compounds and tires and market trends in the tire and rubber industry.
Aug. 2001	- March 2016	Bridgestone Americas (formerly the Firestone Tire and Rubber Company), Akron, Ohio.
2014	- 2016	<u>Director, Compound Development and Laboratories</u> , Bridgestone Americas, Akron, Ohio. Dr. Poulton lead the group responsible for development and testing of rubber compounds for North and South American passenger, light truck, off road, agricultural, truck and bus tires.
2011	- 2014	<u>Director, Consumer Tire Development</u> , Bridgestone Americas, Akron, Ohio. Dr. Poulton led the group responsible for design and development of passenger and light truck tires for North and South America for both OE and Replacement Market applications.
2010	- 2011	<u>Director, Product Development & Technology Planning</u> , Bridgestone Americas, Akron, Ohio. Dr. Poulton supported the Vice President Product Development and Chief Technology Officer's longer term strategic planning activities.
2009	- 2010	<u>Director, Bridgestone Americas Center for Research and Technology</u> , Bridgestone Americas, Akron, Ohio. Dr. Poulton led Bridgestone's North and South American research center with responsibilities for tire and non-tire materials/polymer and process research.
2001	- 2009	<u>Manager/Section Manager-Polymer Development</u> , Bridgestone Americas Center for Research and Technology, Akron, Ohio. Dr. Poulton led the group of scientists who were responsible for new polymer development.
Nov. 1995	- Aug. 2001	<u>Product Development Chemist, Manager Science and Technology Projects</u> , Ansell Healthcare, Coshocton, Ohio. Dr. Poulton developed new and improved glove formulations for chemical resistant and clean room applications.
June 1993	- Nov. 1995	<u>Polymer Scientist</u> , Bridgestone/Firestone Research, Akron, Ohio. Dr. Poulton synthesized and scaled up new polymers for tire and non-tire applications.

Dr. Poulton has worked in various areas of tire and material development including polymer synthesis/scale up, compound design, tire design, raw materials testing and tire testing. He is a named co-inventor on 31 US patents and multiple international patents. Over the course of his career, Dr. Poulton has completed dozens of Forensic/Failure Analysis projects on a variety of products involving a wide-range of rubber and plastics.

FORMAL EDUCATION

B.S. Chemistry, The Ohio State University, Columbus, Ohio

Ph.D. Chemistry, Indiana University, Bloomington, Indiana

ORGANIZATION MEMBERSHIPS

Rubber Division-American Chemical Society

United States Tire Manufacturing Association-Tire Materials Group

EXTERNAL TRAINING

Introduction to Failure Mode and Effects Analysis for Product and Process-SAE International, April 2018

Tire Forensic Analysis-SAE International, April 2018

PUBLICATIONS/PRESENTATIONS

Case Studies in Failure Analysis of Rubber and Plastics, Invited Presentation at Spring Technical Meeting of The Ontario Rubber Group, June 13, 2023.

Case Studies in Failure Analysis of Rubber and Plastics, Invited Presentation at Spring Technical Meeting of The Southern Rubber Group, March 7, 2023.

Case Studies in Failure Analysis of Rubber and Plastics, Webinar sponsored by American Chemical Society Rubber Division, March 1, 2023.

General Considerations in Failure Analysis of Rubber and Plastics, Mid-Atlantic Group Winter Technical Meeting, November 2022.

General Considerations in Failure Analysis of Rubber and Plastics, Ohio Rubber Group Spring Technical Meeting, April 2022.

Fracture and Fractography of Rubber Materials, Invited Contribution to Characterization and Failure Analysis of Plastics, ASM Handbook Volume 11B, 2022.

General Considerations in Failure Analysis of Rubber Articles, Rubber World, February 2022.

General Considerations in Failure Analysis of Rubber and Plastics, Webinar sponsored by The Rubber Division of The American Chemical Society, January 2022.

General Considerations in Failure Analysis of Rubber and Plastics, Webinar sponsored by American Chemical Society Rubber Division, June 2021.

General Considerations in Failure Analysis of Rubber and Plastics, Webinar for Mid Atlantic Rubber Group, June 2021.

General Considerations in Failure Analysis of Rubber and Plastics, 197th Technical Meeting of the American Chemical Society Rubber Division, April 2021.

General Considerations in Failure Analysis of Rubber and Plastics, Invited Presentation for Annual Meeting of The Society of Accredited Marine Surveyors, September, 2019.

General Considerations in Failure Analysis of Rubber and Plastics, Webinar sponsored by The Rubber Division of The American Chemical Society, June 2019.

General Considerations in Failure Analysis of Rubber and Plastics, 195th Technical Meeting of the American Chemistry Society Rubber Division, May 2019.

General Considerations in Failure Analysis of Rubber and Plastics, Webinar sponsored by The Association of Rubber Product Manufacturers, December 2018.

“Modern Tires: The Role of Polymers in Those Four Round Black Things on Your Car”, 238th National ACS Meeting, Washington DC, Symposium on Polymer Science of Everyday Things, Paper POLY-020, August 16-20, 2009.

7/11/2023

Testimony Provided by Jason Poulton, Ph.D.

Year	Case Caption	Client	Pltf/Def	Field
2023	Antonio Avalos vs. Michelin North America, Majco, Mullahey Ford, Perry Ford Lincoln of San Luis Obispo & Puente Hills Ford (D)	Yukevich Cavanaugh	D	Rebuttal of Plaintiff's Report
2020	Kalny vs. Slater (ZT)	Michael Kalny	P	Analytical Testing of Engine Components

(A) = Arbitration
(D) = Deposition
(T) = Trial
(Z) = Zoom

JP/mas:TESTIMONYJP.docx/7-11-23



Laboratory Services Quotation

Brad Gilling
Rock Fintek Trading Company
1680 Michigan Ave, Suite 800
Miami Beach FL, 33139 USA
Phone: (305) 501-3000

bg@rockfintek.com

Date: 12/28/2021
Quotation #: 1221-108326

Payment Terms:
P.O. Required, NET-30

Service Description: Polymer type ID by FTIR Analysis and Total Nitrogen Content by Elemental Analysis (LECO method) on nine glove samples

PO#:

Samples Received:

Please use this space for sample identification or send an attached document. If there are any discrepancies with what has been pre-printed, please contact us immediately.

Select Reporting Units:

☐ English Units ☒ SI Units

Select Report Format:

☐ 1 Report per Project ☒ 1 Report per Sample (add \$50/ report) ☐ Other _____

ITEM	DESCRIPTION	Price per test (Sample)	Number of tests	AMOUNT
1	ASTM D 3677: Polymer ID by FTIR - Polymer ID	\$200	9	\$1,800
VARIABLES: 1) FTIR scan 4000 to 666 cm ⁻¹ 2) If the polymer type is not reportable per this method, we will report the findings per ASTM E1252				
SAMPLES: As submitted by customer				
Select a Decision Rule: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 ON SCOPE				
2	Total Nitrogen Content per LECO method (Elemental Analysis)	\$150	9	\$1,350
VARIABLES: This testing is meant to confirm the presence of Nitrile Rubber in the tested samples however, w/o total polymer content values the lab cannot confirm the NBR/ACN content based only on it.				
SAMPLES: As submitted by customer				
Select a Decision Rule: <input checked="" type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 NON SCOPE				



Laboratory Services Quotation

1221-108326

ITEM	DESCRIPTION	Price per test (Sample)	Number of tests	AMOUNT
------	-------------	----------------------------	--------------------	--------

Estimated Timeframe: 7-10 business days

From receipt of all samples, form of payment and signed quotation.

TOTAL \$3,150.00

Effective November 2019, please select your Reporting Units; Report Format; and select a Decision Rule for each test line prior to returning this quotation with your form of payment and test samples.

This quote may not include the price of tasks that were unforeseen but necessary to begin testing (i.e. sample prep, curing, rheometer, etc). If needed, we will update the quote with the additional charges and send it out for your approval prior to starting testing.

ARDL Deliverables

As applicable, a report containing: Analysis, tables, graphs, and plots of results at ARDL per the standard performed and/or as agreed to here between ARDL and its client.

This quotation is good for a period of 60 Days. A form of payment is requested to begin work. Examples include purchase order, credit card or proforma invoice for clients outside of the US. Please contact our accounts receivable department at 1 (330) 434 – 6665 to discuss acceptable forms of payment.

Subject to the above terms and conditions, all work performed pursuant to this quote will be performed to our best effort, using good judgment and established standard laboratory practices and procedures where applicable. All work will be performed promptly and in a professional fashion with confidentiality. We offer no warranties, written or implied. * All prices are listed in US Dollars. ** Electronic delivery is the primary option for all test reports. Paper copies will always be available by request. Upon completion of a project, test items will be retained for a minimum of 30 days. If you wish your samples to be retained longer than 30 days or to be returned at your expense, please note that request when submitting samples for testing.

Thank you for choosing Akron Rubber Development Laboratory Inc., for your testing and analysis needs.

Client Approval By

Print Name SCOTTLEY B. ILLING

Date 12/29/21

Signature [Signature]

Quoted By:

Ana Barbur
Vice President Chemical, Pharmaceutical & Microbiological Services
ARDL Chemical Testing
anab@ardl.com



Uncertain About Uncertainty? – Don't Be!

The latest revision of ISO 17025 requires ARDL to group the test standards covered by our Scope of Accreditation into five categories based on the nature of testing. Additionally, for test categories II, III, IV and V we are required to ask customers to choose a “Decision Rule” regarding the measurement uncertainty associated with that testing. The Decision Rules are listed below and the definitions of the five test categories are listed at the end of this notice.

The Decision Rules are simple:

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state “Pass” or “Fail”, based on those values only. If ARDL runs a test for you that does not have pass/fail requirements, ARDL will report only the values observed. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL’s Scope of Accreditation.

Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes “Guard Bands”, where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more “Certain” of their Pass/Fail result. For example, a test method to determine the weight of an object may have a measurement uncertainty of +/- 3.0 grams. Let’s say the measured result of this test method is 13.0 grams. If a test specification noted values between 5 grams and 15 grams as “Passing” results, Guard Banding would narrow this range to between 8 grams and 12 grams. Applying Rule 2 to this scenario, a reading of 13.0 grams would be reported as a “Fail”.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.



Testing. Development. Problem Solving

Test Categories

Category I: Qualitative or semi-qualitative tests for which measurement of uncertainty budgets will not be required. By default, ARDL will apply Decision Rule 1 for this category.

Category II: Well-recognized test methods that specify limits values to the major sources of measurement uncertainty and specify the form of presentation of the calculated results. Requirements include following the test method and reporting instructions. If asked, ARDL will employ the precision and bias listed in the standard, if we have not developed a budget.

Category III: Chemical, biological & environmental test methods based on published regulatory or consensus test methods for which measurement of uncertainty is not defined. Budgets must be developed for this category.

Category IV: Test methods that need identification of the major components of uncertainty and reasonable estimation of measurement uncertainty.

Category V: Test methods that need identification of all components of uncertainty and detailed measurement of uncertainty budgets calculated in accordance with published methods described in the Guide to the Expression of Uncertainty Measurement.

For clarification on the category of tests or the measurement uncertainty, please feel free to reach out to ARDL's Quality Manager, **Rick Behne**, at 330-794-6600 or by email at rick_behne@ardl.com.

Thank you for your business!

Akron Rubber Development Laboratory, Inc.
www.ardl.com

Date: 12/28/2021

SAMPLE SUBMITTAL/ TESTING REQUEST FORM

Please ship samples to:

**2887 GILCHRIST RD., AKRON,
OHIO 44305**

Attention:

- ☒ Chemical Testing ☐ Microbiological
☐ Compounding ☐ Microscopy
☐ Engineering ☐ Physical Testing
☐ Legal/ Forensics ☐ Plastics Testing

Shipping Method

- ☐ Fed Ex ☐ Hand Deliver
☐ USPS ☐ DHL
☐ UPS
☐ Other

Payment Terms:

P.O. Required, NET-30

Contact Name (if known):

Ana Barbur

PLEASE NOTE -- DOMESTIC ORDERS (US & CANADA): **PURCHASE ORDER IS REQUIRED TO BEGIN TESTING.**
OUTSIDE OF THE US & CANADA: **ADVANCED PAYMENT IS REQUIRED TO BEGIN TESTING.**
PLEASE CALL 001-330-434-6665 FOR INFORMATION ON ACCEPTED METHODS.

Name Brad Gilling		Title	
Company Rock Fintek Trading Company			PO#
Address 1680 Michigan Ave, Suite 800			
City Miami Beach	State FL	Zip Code 33139	Country USA
Billing Address (If Different From Above) 1680 Michigan Ave, Suite 800			
City Miami Beach	State FL	Zip Code 33139	Country USA
Phone (305) 501-3000		Fax	
Email Address bg@rockfintek.com			
ARDL Quotation Number and Subject (If you have further concerns, please describe below) 1221-108326 Polymer type ID by FTIR Analysis and Total Nitrogen Content by			Report Format: <input type="radio"/> Hard Copy <input checked="" type="radio"/> Email
Sample Description (Please add the Sample ID# and/or basic description below)			

PLEASE COMPLETE THIS FORM AND SEND IT BACK WITH YOUR SAMPLE(S) AND PURCHASE ORDER

Testing. Development. Problem Solving.

Accepted Methods of Payment For Akron Rubber Development Laboratory, Inc. (ARDL)

DOMESTIC AND INTERNATIONAL WIRE TRANSFER Deposit:

Account: 1652015450, Routing & Transit: 043400036, SWIFT: WEBCUS33

ACH/EDI or EFT Deposit:

Account: 1652015450, Routing & Transit: 043400036

WesBanco Bank 1 Bank Plaza Wheeling, WV 26003

Matt Reed, Vice President, Treasury Management

(614) 904-7068 office

(614) 312-0981 cell

tmsupport@wesbanco.com

If you are sending a wire transfer, please include the amount to pay for your bank wire fees.

COMPANY CHECK, drawn on a US bank or payable in US funds

CASHIER'S CHECK, payable in US funds

CREDIT CARD: Visa, Mastercard, or American Express

If you prefer to pay by credit card, please complete the following and fax this form to our Accounting Department at (330) 434-0004 or send email to deborah_flaherty@ardl.com Your account information will remain confidential and your ARDL contact will be advised that your information has been received.

Company Name: _____

Card #: _____ Expiration Date: _____

Cardholder's Name: _____

CVV2 Code (for **Master Card** and **Visa** - last 3 digits located in the signature box on the back of the card; for **American Express**, it's a 4 digit code on the front of the card) _____

Street Address: _____

Zip Code: _____ Phone #: _____

Authorized Signature: _____

Amount to charge: \$ _____ (US Funds)

Akron Rubber Development Laboratory, Inc. Contact _____

ARDL Project Number _____

Email address for receipt: _____

If you have any questions or require further information, please call (330) 434-6665 during business hours or you **may send an e-mail to deborah_flaherty@ardl.com**.

Thank you for your business,
Deborah Flaherty
Accounts Receivable

Betty Heath
Accounting Manager



Testing. Development. Problem Solving.

January 20, 2022

▪TEST REPORT▪

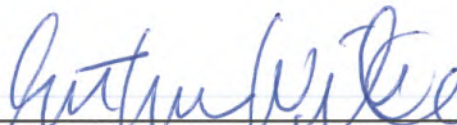
PN 162931-A Rev. 1
CC Payment

CHEMICAL ANALYTICAL SERVICES

Prepared For:

Brad Gilling
Rock Fintek Trading Company
1680 Michigan Avenue Suite 800
Miami Beach, FL 33139

Prepared by:


Arthur Wilde, Sr. Chemical Technician
Chemical/Analytical Services

Approved By:


Thomas D. Samples, Manager
Chemical/Analytical Services

Rev 110119



An A2LA ISO 17025 Accredited Testing Laboratory – Certificate Numbers 255.01 & 256.02
ISO 9001:2015 Registered

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Registered

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Testing. Development. Problem Solving.

January 20, 2022
 Brad Gilling
 Rock Fintek Trading Company

Page 2 of 4
 PN 162931-A Rev. 1

SUBJECT: Analytical testing on samples submitted by above referenced company.

RECEIVED: Sample identified as; Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves Lot ZYMD01202103

Decision Rule 1

POLYMER IDENTIFICATION; ASTM E1252

Instrument: Perkin-Elmer Infrared Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Pyrolysis, Hotmelt

TABLE 1 – POLYMER IDENTIFICATION

<u>SAMPLE ID</u>	<u>POLYMER</u>
2 Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves Lot ZYMD01202103	Acrylonitrile Butadiene Rubber

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO₂. The NO₂ gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO₂ gas was measured by thermal conductivity and the final results was calculated by the LECO microprocessor as a weight percent of Nitrogen.

TABLE 2 - TOTAL NITROGEN

<u>SAMPLE ID</u>	<u>TOTAL NITROGEN, %</u>
2 Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves Lot ZYMD01202103	6.93

Note: Results are an average of triplicate runs.

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January 20, 2022
Brad Gilling
Rock Fintek Trading Company

Page 3 of 4
PN 162931-A Rev. 1

**Sample: One Box of Nitra Force Medcare Size Medium Powder Free Non Sterile NBR Nitrile Exam Gloves
Lot ZYMD01202103**



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January 20, 2022
Brad Gilling
Rock Fintek Trading Company

Page 4 of 4
PN 162931-A Rev. 1

Decision Rules

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state "Pass" or "Fail", based on those values only. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL's Scope of Accreditation.

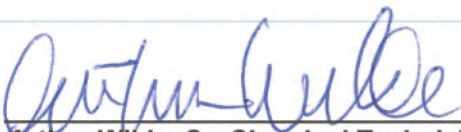
Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

<u>Date</u>	<u>Report Revision</u>	<u>Description</u>
1/19/22	New	
1-20-22	Revision 1	Customer requested separate report for Sample 2

Prepared by:



Arthur Wilde, Sr. Chemical Technician
Chemical/Analytical Services

AW/TDS/mak/kr

Approved By:



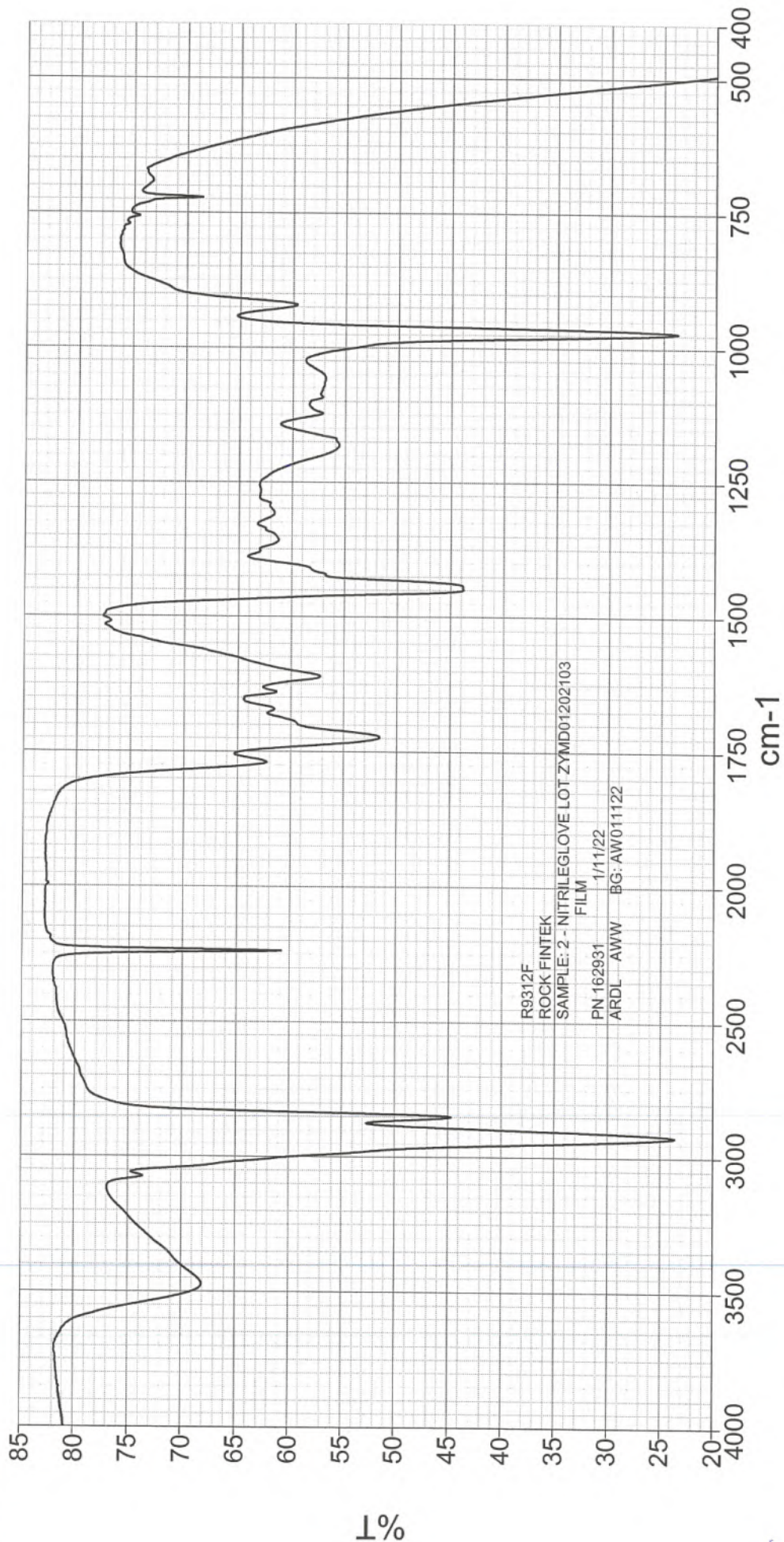
Thomas D. Samples, Manager
Chemical/Analytical Services

**ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. Unless specified, the current specification version is used.*

*NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.**

Analyst
Date

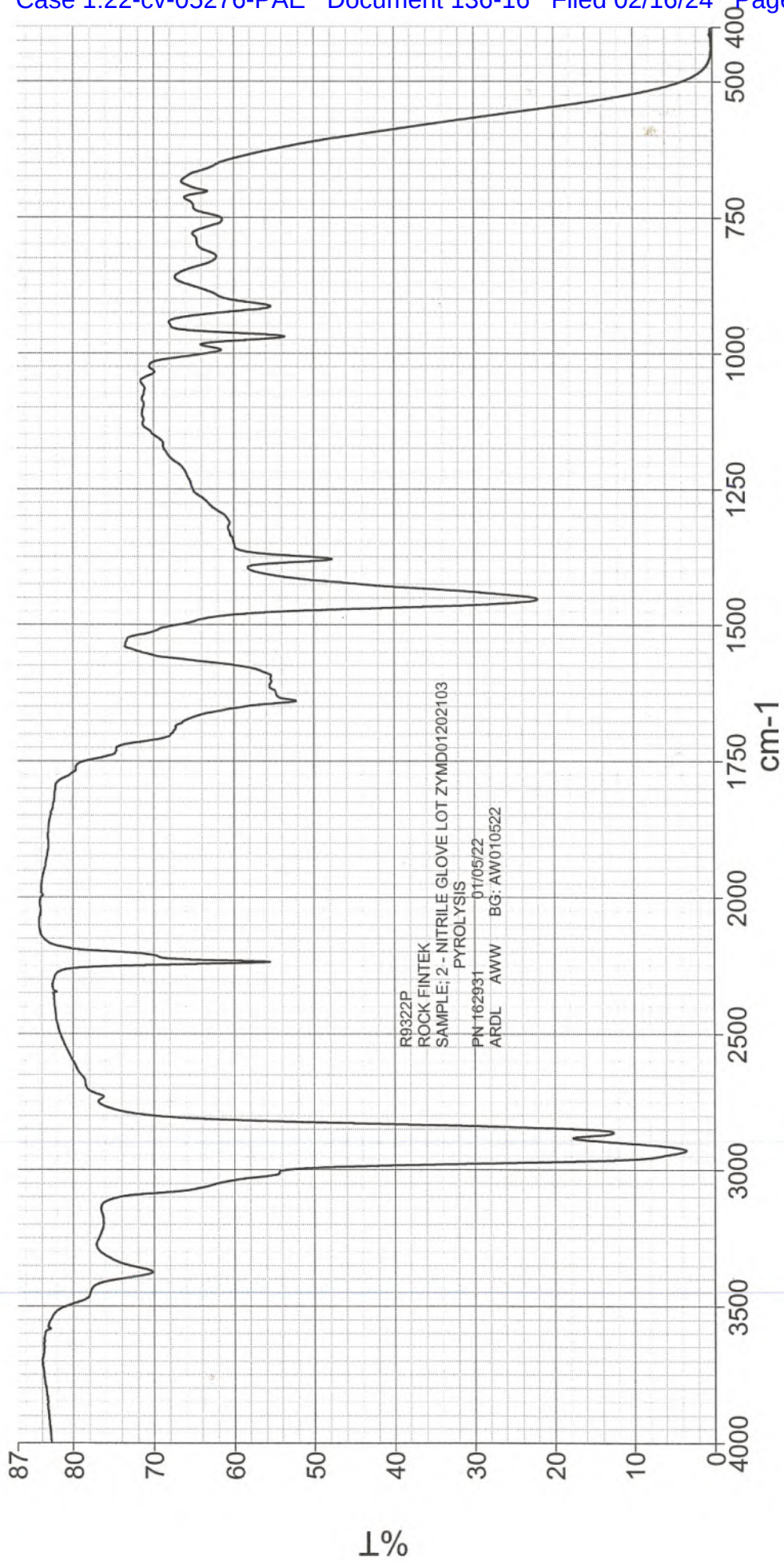
Administrator
Tuesday, January 11, 2022 10:04 AM



R9312F Frontier C97746 Tuesday, January 11 2022

Analyst
Date

Administrator
Wednesday, January 05, 2022 1:17 PM



R9312P Frontier C97746 Wednesday, January 05 2022



Testing. Development. Problem Solving.

January 20, 2022

▪TEST REPORT▪

PN 162931-B Rev. 1
CC Payment

CHEMICAL ANALYTICAL SERVICES

Prepared For:

Brad Gilling
Rock Fintek Trading Company
1680 Michigan Avenue Suite 800
Miami Beach, FL 33139

Prepared by:

A handwritten signature in blue ink, appearing to read "Arthur Wilde", is written over a horizontal line.

Arthur Wilde, Sr. Chemical Technician
Chemical/Analytical Services

Approved By:

A handwritten signature in blue ink, appearing to read "Thomas D. Samples", is written over a horizontal line.

Thomas D. Samples, Manager
Chemical/Analytical Services

Rev 110119



An A2LA ISO 17025 Accredited Testing Laboratory – Certificate Numbers 255.01 & 256.02
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Testing. Development. Problem Solving.

January 20, 2022
 Brad Gilling
 Rock Fintek Trading Company

Page 2 of 7
 PN 162931-B Rev. 1

SUBJECT: Analytical testing on samples submitted by above referenced company.

RECEIVED: Sample identified as; Eight (8) Nitra Force Medicare Glove Types

- 1- Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101
- 2- 3-Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot T4
- 3- Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot MEDCARE202101
- 4- Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102
- 5- Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002
- 6- Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102
- 7- Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106
- 8- Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012

Decision Rule 1

POLYMER IDENTIFICATION; ASTM E1252

Instrument: Perkin-Elmer Infrared Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Pyrolysis, Hotmelt

TABLE 1 – POLYMER IDENTIFICATION

<u>SAMPLE ID</u>	<u>POLYMER</u>
1-Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101	Polyvinyl Chloride
2 Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Glove Lot T4	Polyvinyl Chloride
3 Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot MEDCARE202101	Polyvinyl Chloride
4 Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102	Polyvinyl Chloride

**ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. Unless specified, the current specification version is used.*

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January 20, 2022
 Brad Gilling
 Rock Fintek Trading Company

Page 3 of 7
 PN 162931-B Rev. 1

TABLE 1 – POLYMER IDENTIFICATION,continued

<u>SAMPLE ID</u>	<u>POLYMER</u>
5 Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002	Polyvinyl Chloride
6 Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102	Polyvinyl Chloride
7 Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106	Polyvinyl Chloride
8 Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012	Polyvinyl Chloride

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO₂. The NO₂ gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO₂ gas was measured by thermal conductivity and the final results was calculated by the LECO microprocessor as a weight percent of Nitrogen.

TABLE 2 - TOTAL NITROGEN

<u>SAMPLE ID</u>	<u>TOTAL NITROGEN, %</u>
1-Size Medium Non Sterile NBR Nitrile Exam Gloves Lot HFK-202103010101	ND
2 Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Glove Lot T4	ND
3 Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot EDCARE202101	ND
4 Size Small NBR Nitrile Non Sterile Exam Gloves Lot HFK-2021050102	ND
5 Size Large NBR Nitrile Non Sterile Exam Gloves Lot QDMD01202002	ND
6 Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves Lot MED202102	ND
7 Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves Lot 20201106	ND
8 Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD012	ND

Note: Results are an average of triplicate runs.

January 20, 2022
Brad Gilling
Rock Fintek Trading Company

Page 4 of 7
PN 162931-B Rev. 1

**Sample: One Box of Nitra Force Medcare Size Medium Non Sterile NBR Nitrile Exam Gloves
Lot HFK-02103010101**



Sample: One Box of Nitra Force Medcare Size XLarge Powder Free Non Sterile Synthetic Nitrile Exam Gloves Lot T4



**Sample: One Box of Nitra Force Medcare Size Medium Powder Free Non Sterile Synthetic Nitrile Exam Gloves
Lot MEDCARE202101**



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January 20, 2022
Brad Gilling
Rock Fintek Trading Company

Page 5 of 7
PN 162931-B Rev. 1

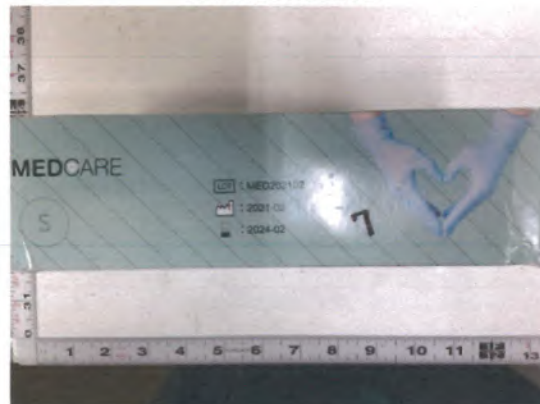
**Sample: One Box of Nitra Force Medcare Size Small NBR Nitrile Non Sterile Exam Gloves
Lot HFK-2021050102**



**Sample: One Box of Nitra Force Medcare Size Large NBR Nitrile Non Sterile Exam Gloves
Lot QDMD0120200212**



**Sample: One Box of Nitra Force Medcare Size Small Synthetic Nitrile Powder Free Non Sterile Protection Gloves
Lot MED202102**



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January 20, 2022
Brad Gilling
Rock Fintek Trading Company

Page 6 of 7
PN 162931-B Rev. 1

**Sample: One Box of Nitra Force Medcare Size XLarge Powder Free Synthetic Nitrile Non Sterile Exam Gloves
Lot 20201106**



Sample: One Box of Nitra Force Medcare Size XLarge NBR Nitrile Non Sterile Exam Gloves Lot ZKMD01202101



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January 20, 2022
 Brad Gilling
 Rock Fintek Trading Company

Page 7 of 7
 PN 162931-B Rev. 1

Decision Rules

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state "Pass" or "Fail", based on those values only. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL's Scope of Accreditation.

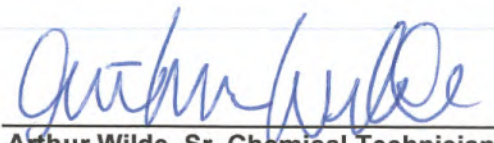
Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

<u>Date</u>	<u>Report Revision</u>	<u>Description</u>
1/19/22	New	
1-20-22	Revision 1	Customer requested sample 2 be deleted from report

Prepared by:

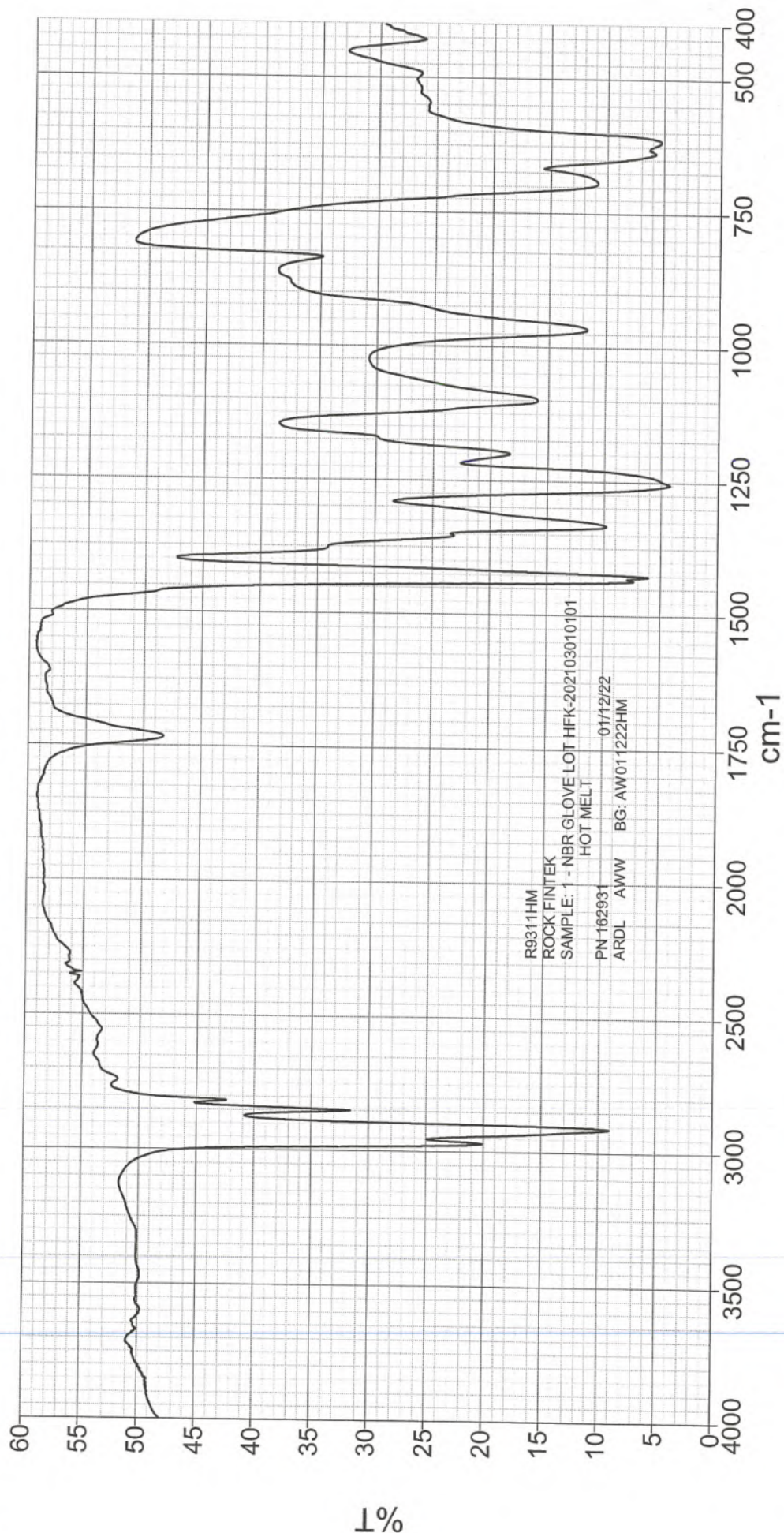

 Arthur Wilde, Sr. Chemical Technician
 Chemical/Analytical Services

Approved By:


 Thomas D. Samples, Manager
 Chemical/Analytical Services

AW/TDS/mak/tkr

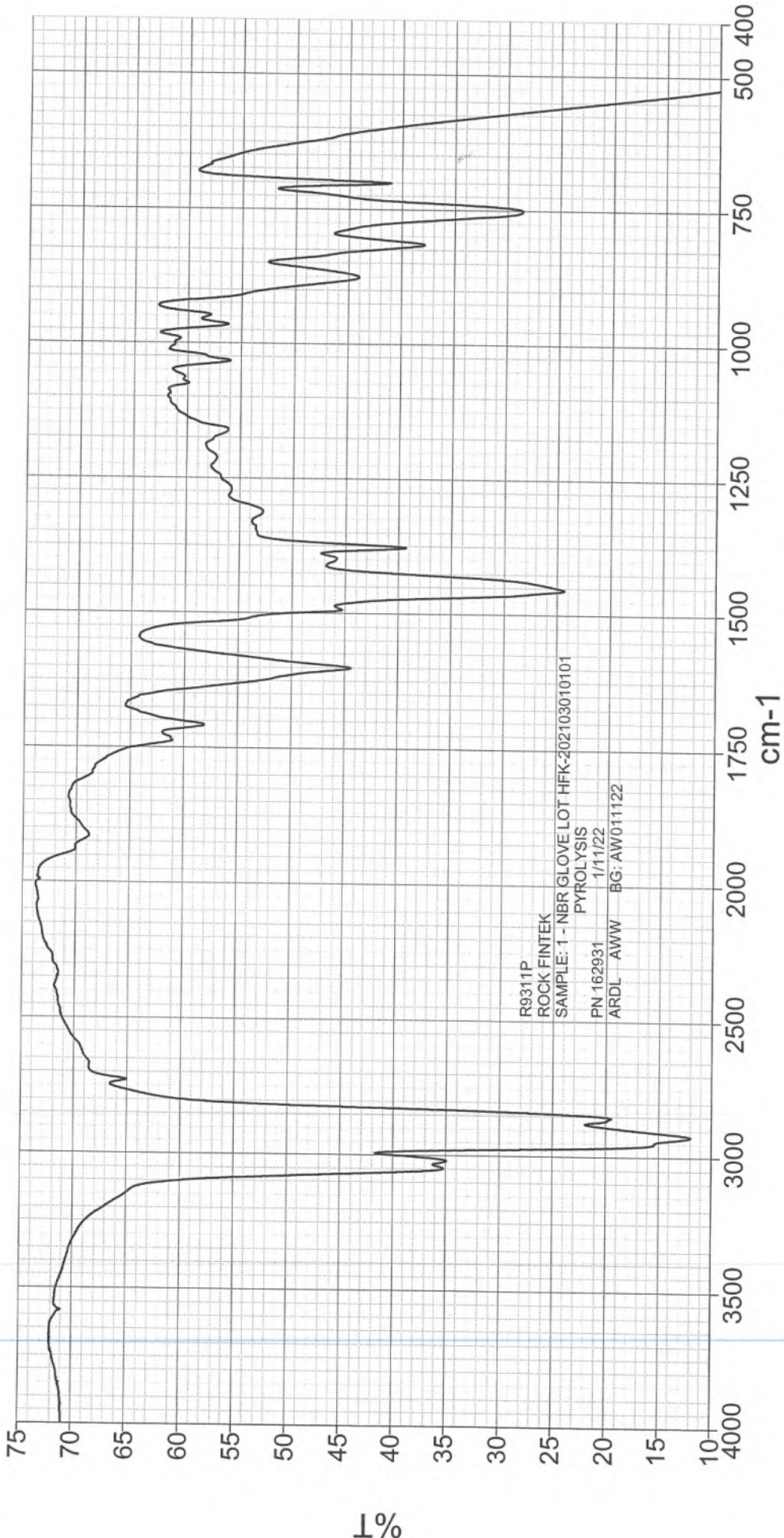
Analyst
Date Administrator
Wednesday, January 12, 2022 10:33 AM



R9311HM Frontier C97746 Wednesday, January 12 2022

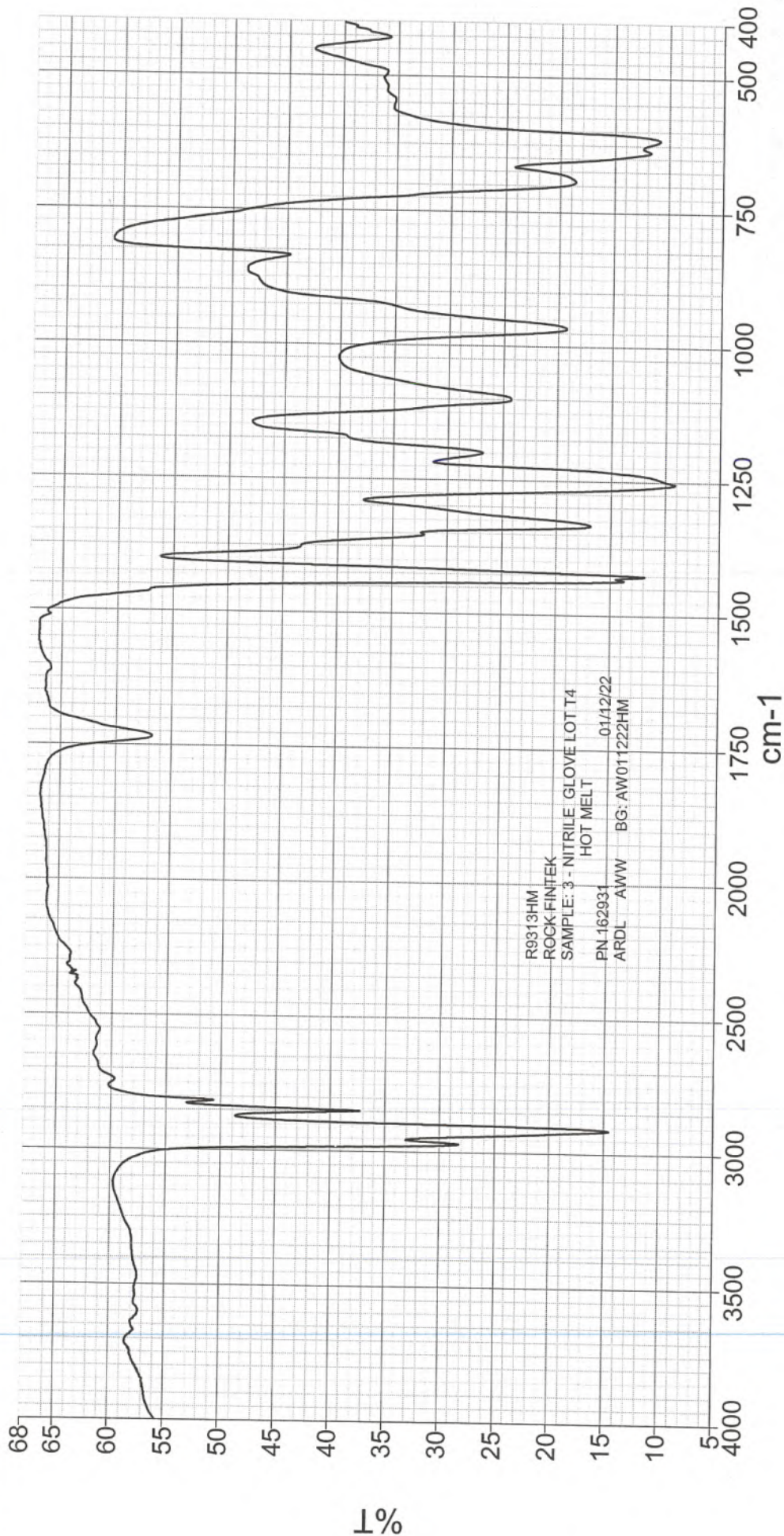
Analyst
Date

Administrator
Tuesday, January 11, 2022 10:15 AM



R9311P Frontier C97746 Tuesday, January 11 2022

Analyst
Date Administrator
Wednesday, January 12, 2022 10:38 AM

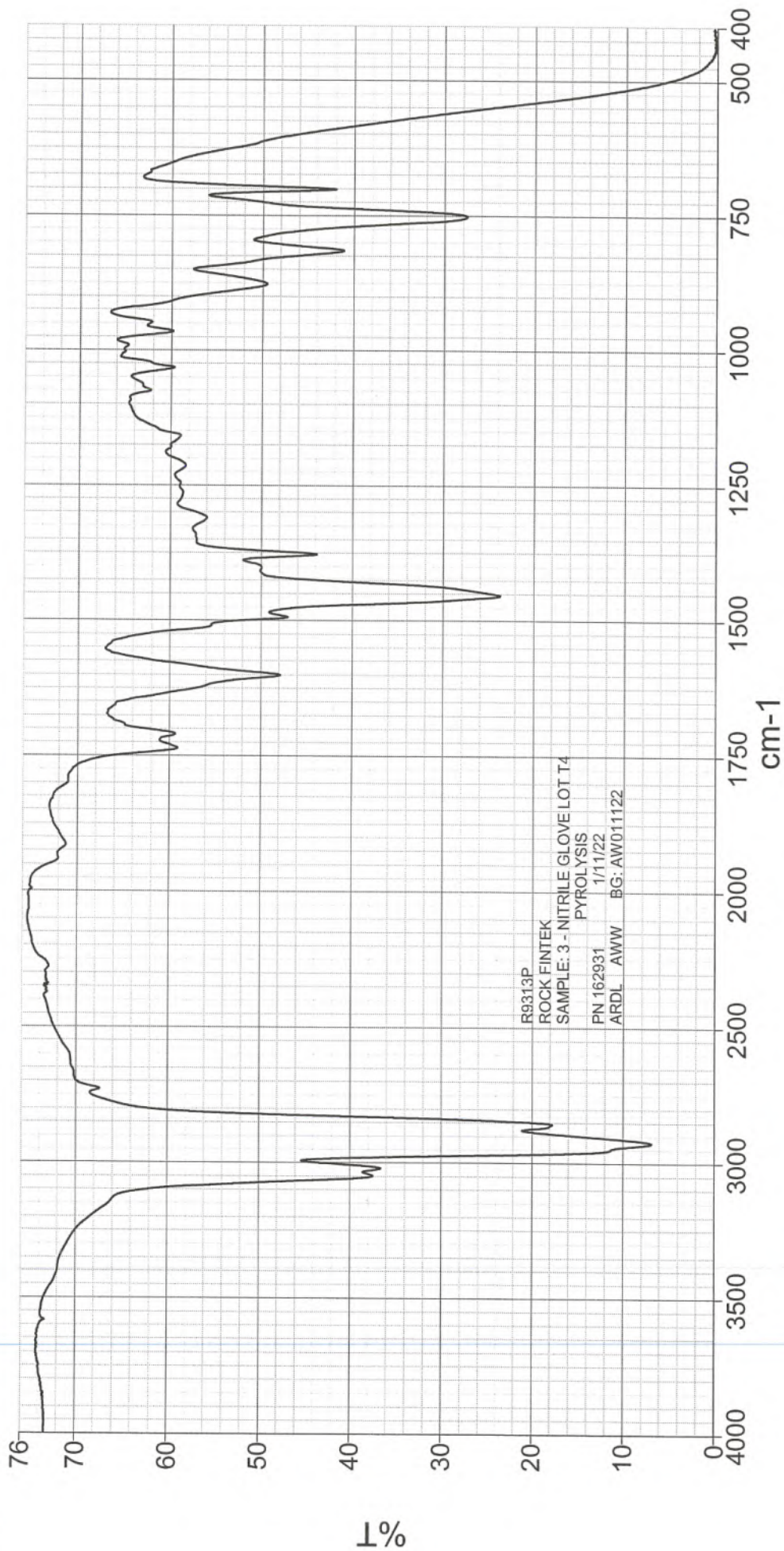


Frontier C97746 Wednesday, January 12 2022

R9313HM

Analyst
Date

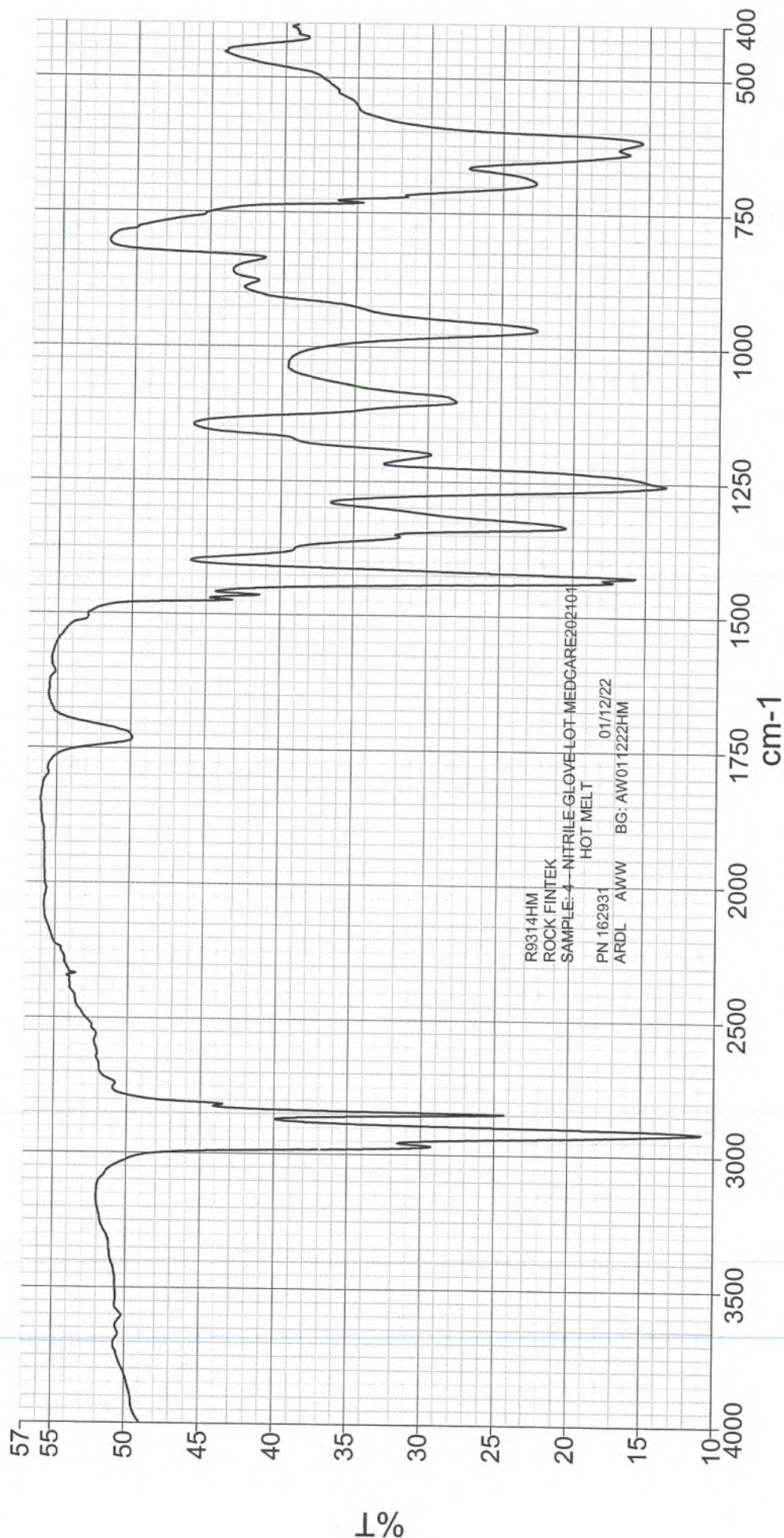
Administrator
Tuesday, January 11, 2022 10:26 AM



R9313P Frontier C97746 Tuesday, January 11 2022

Analyst
Date

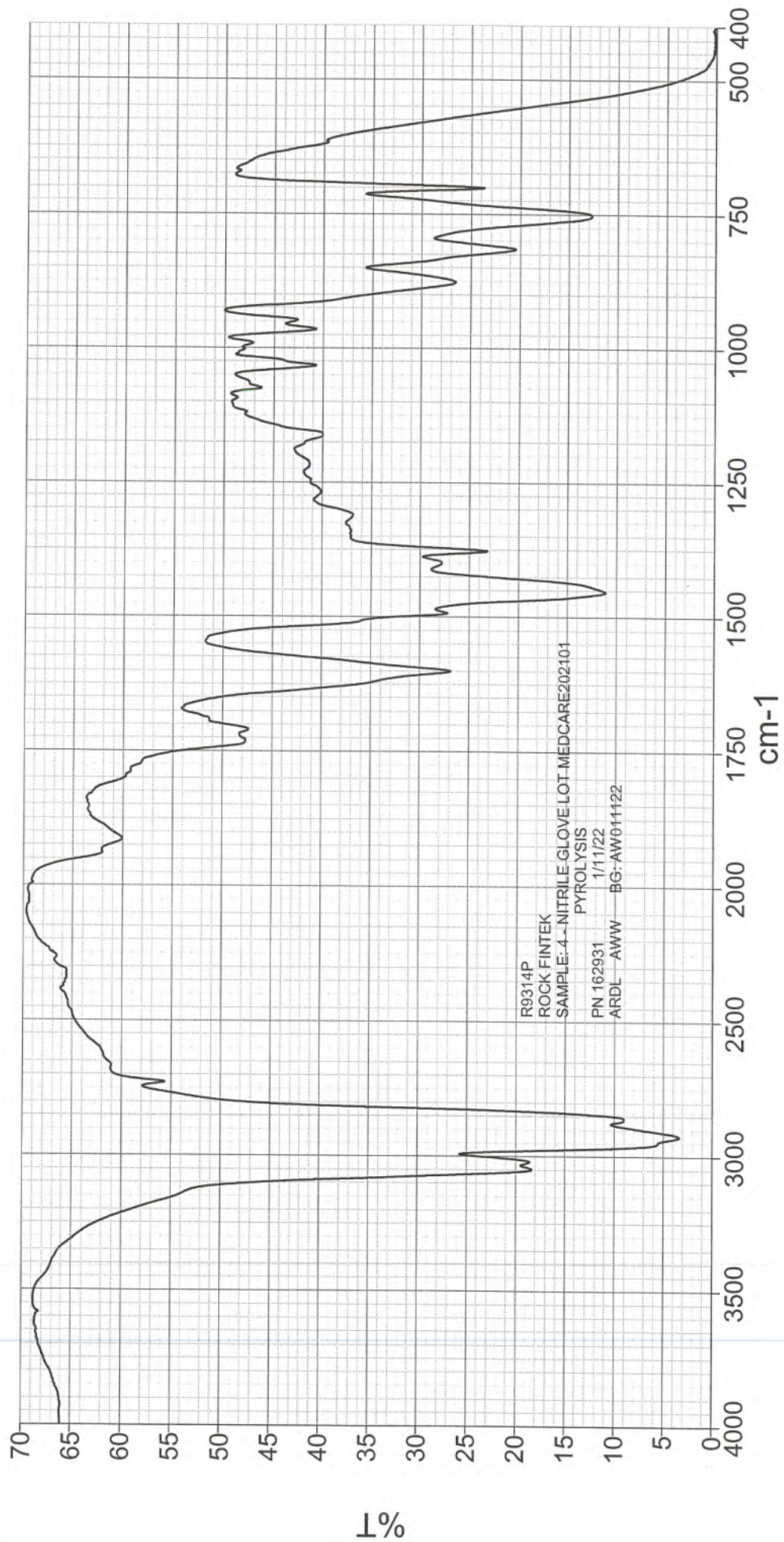
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Wednesday, January 12, 2022 10:49 AM



Frontier C97746 Wednesday, January 12 2022

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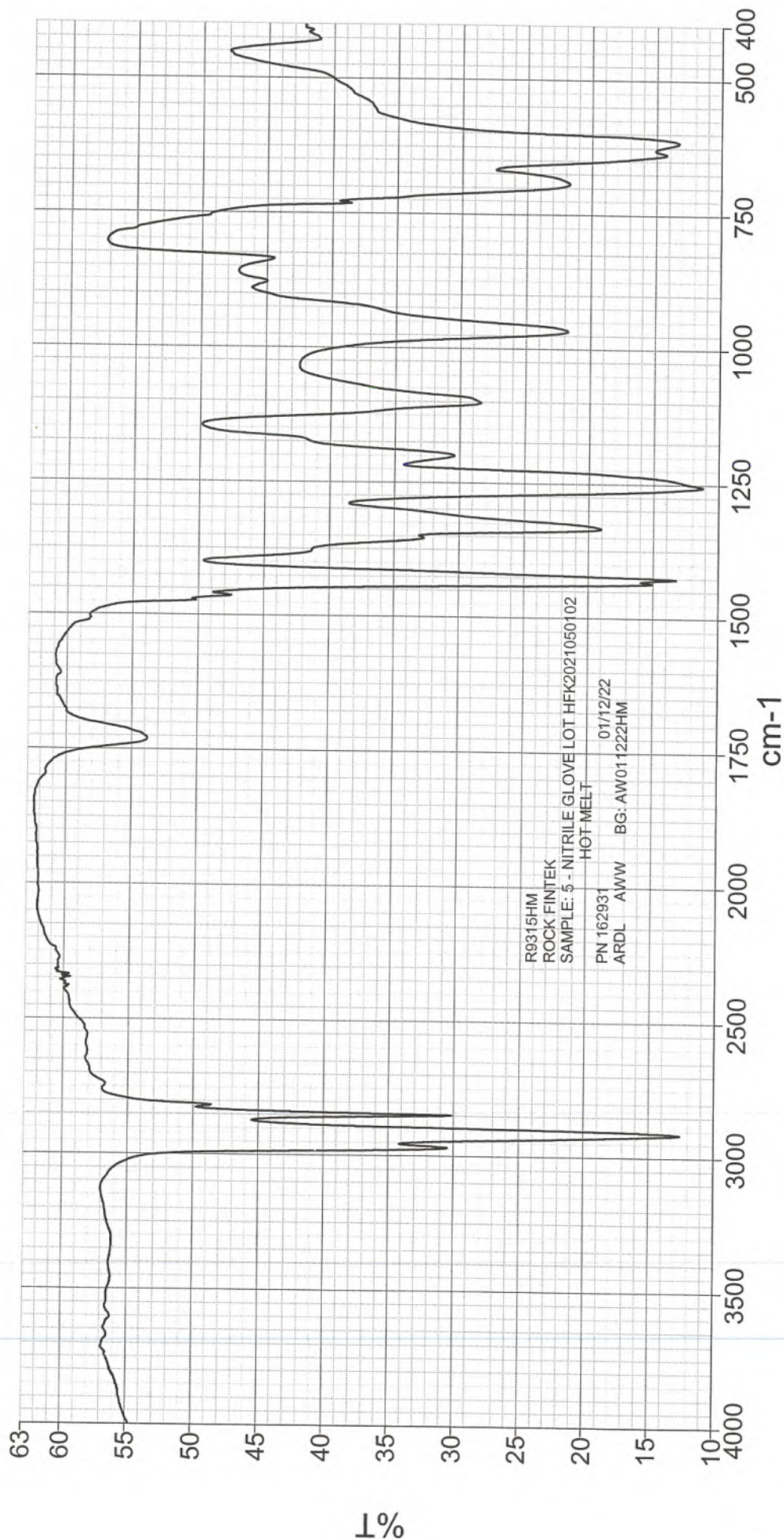
Analyst
Date
Administrator
Tuesday, January 11, 2022 10:33 AM



— R8314P Frontier C97746 Tuesday, January 11 2022

Analyst
Date

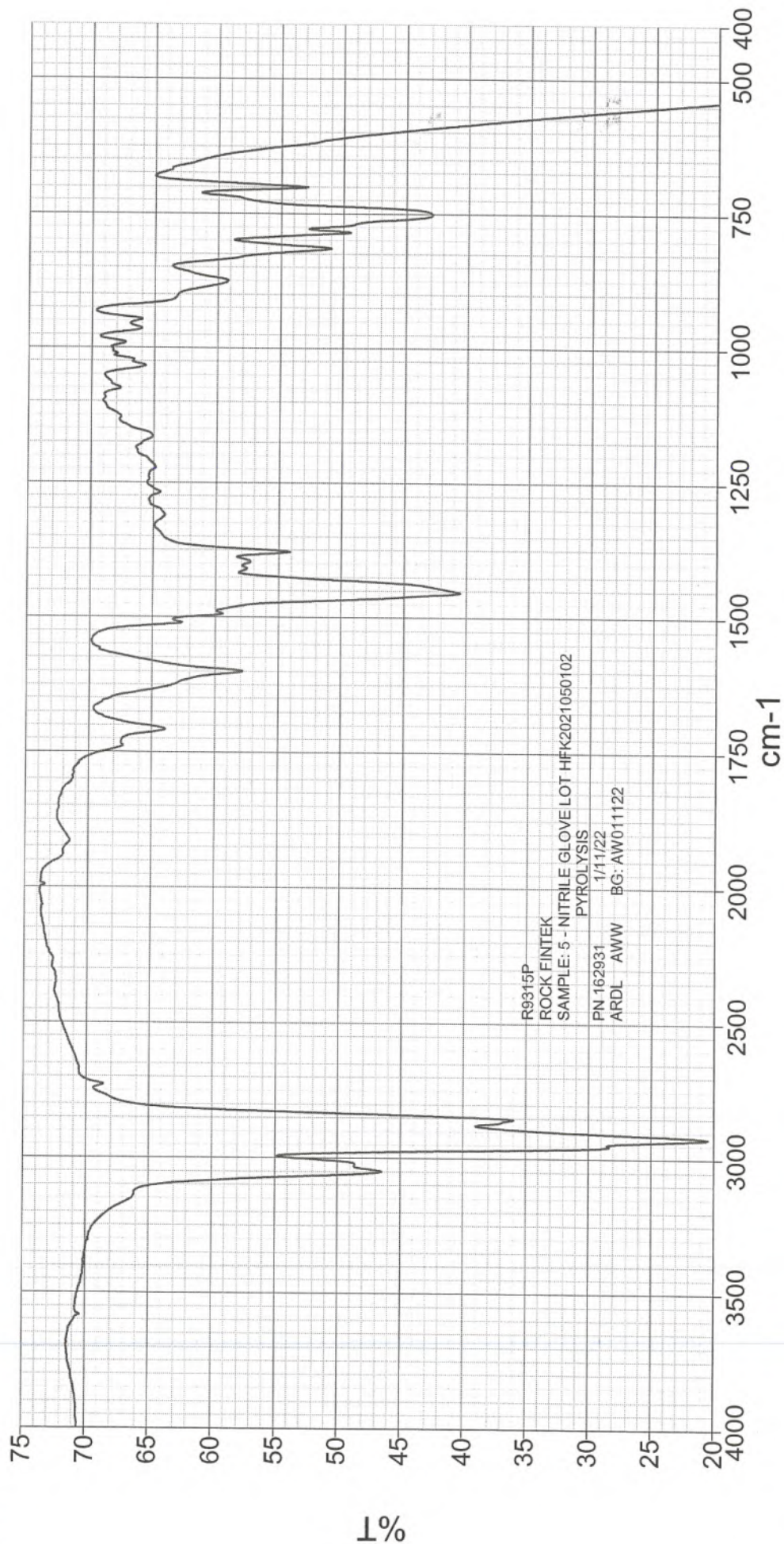
Administrator
Wednesday, January 12, 2022 10:53 AM



R9315HM Frontier C97746 Wednesday, January 12 2022

Analyst
Date

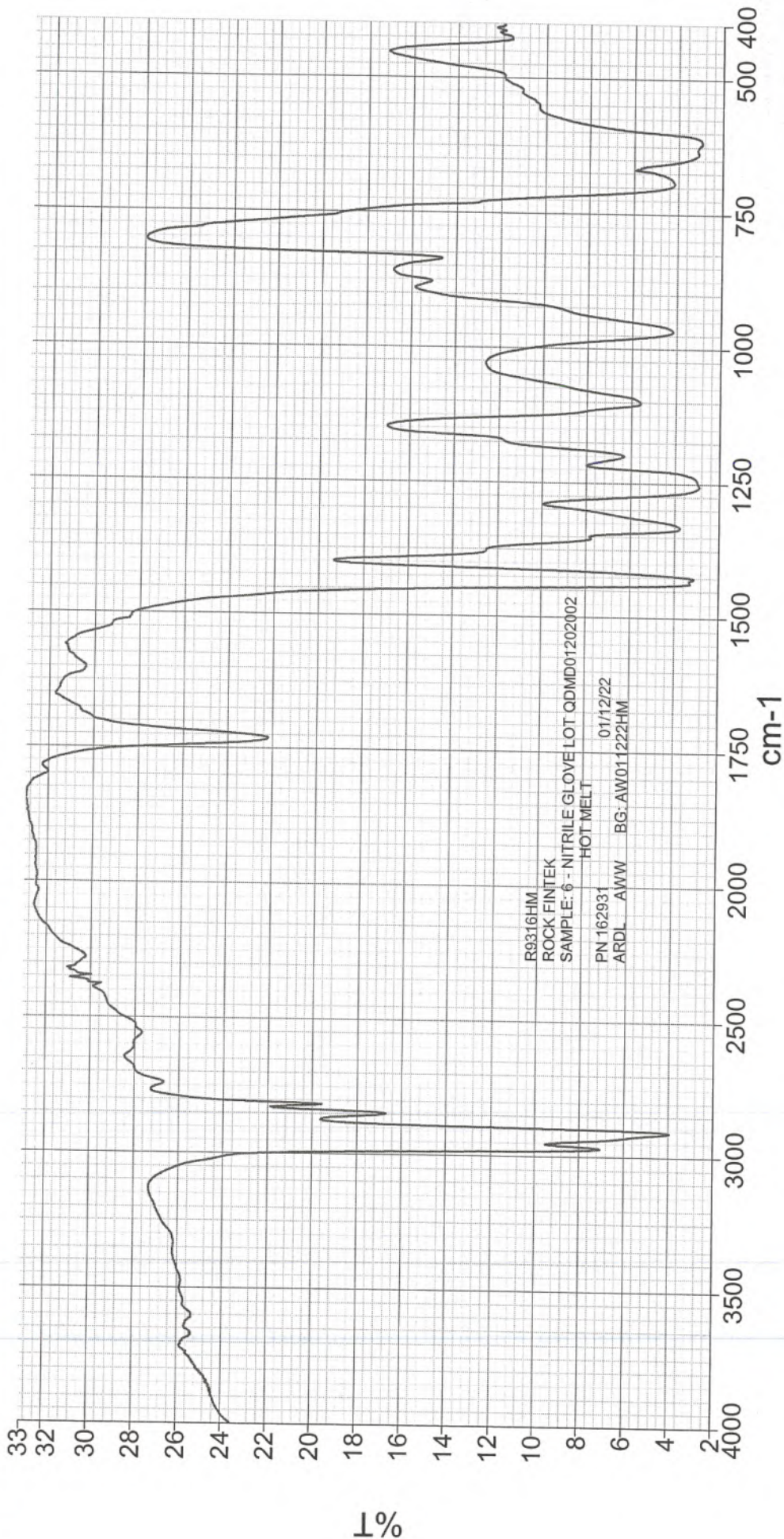
Administrator
Tuesday, January 11, 2022 11:00 AM



R9315P Frontier C97746 Tuesday, January 11 2022

Analyst
Date

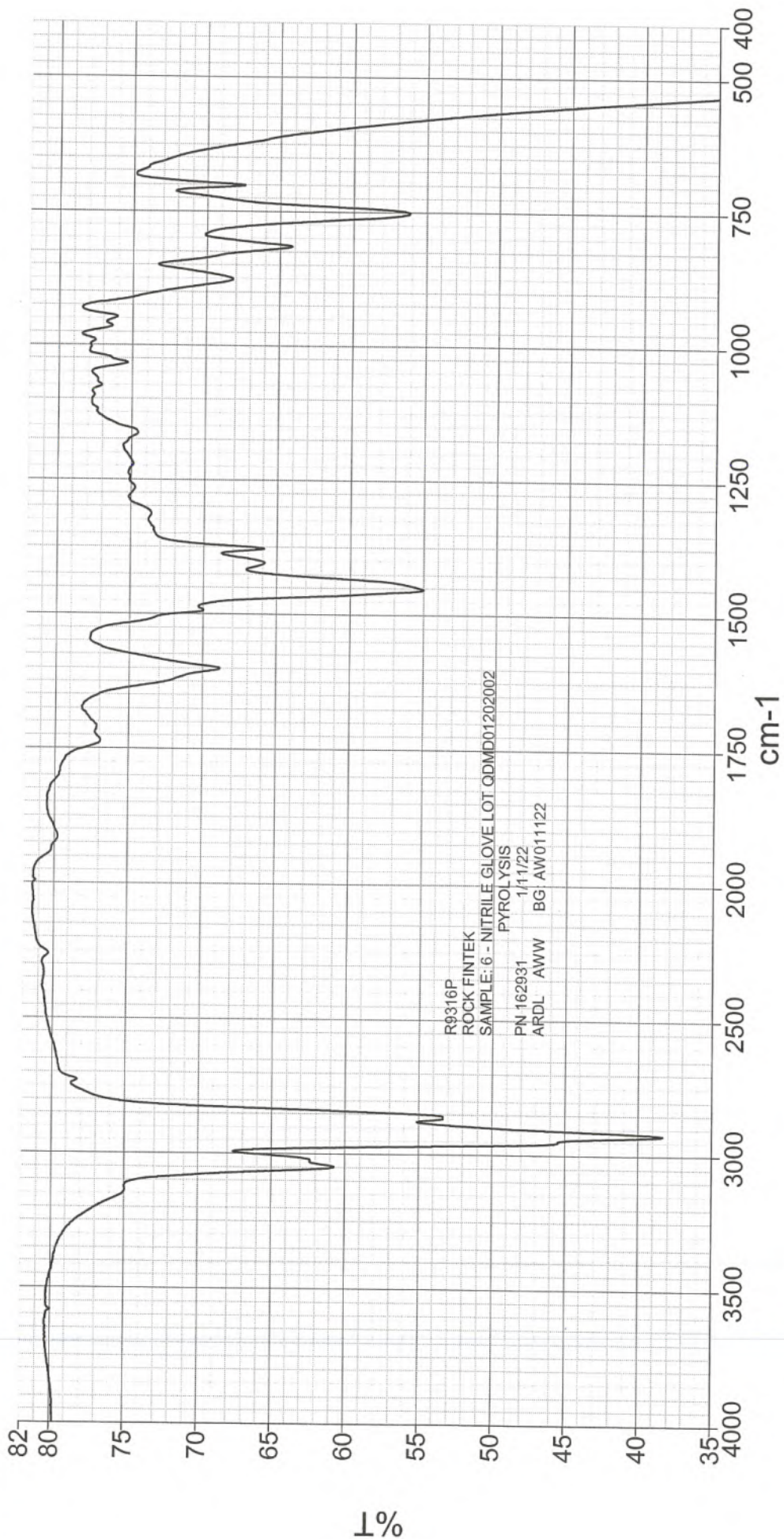
Administrator
Wednesday, January 12, 2022 11:20 AM



Frontier C97746 Wednesday, January 12 2022

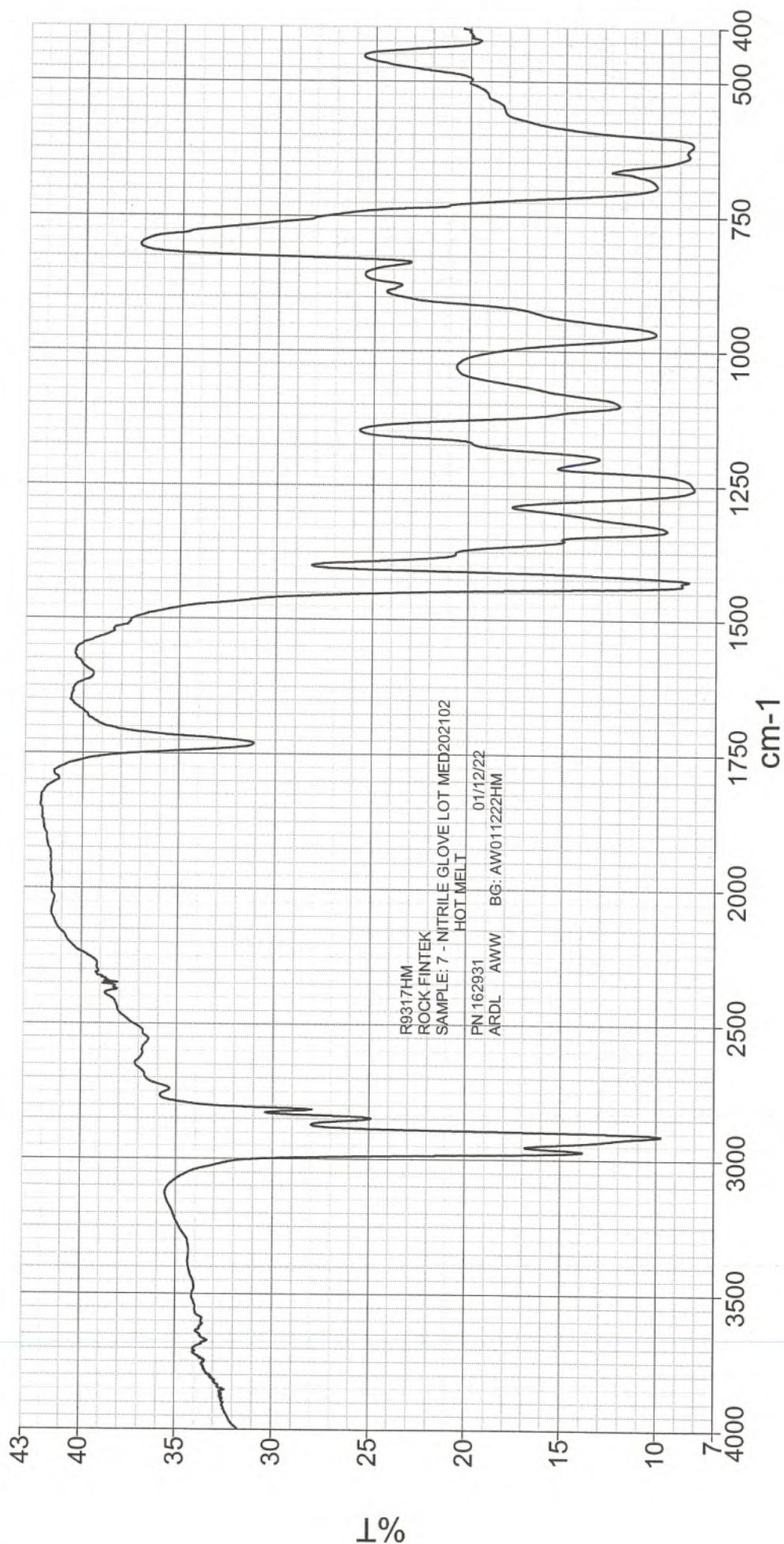
R9316HM

Analyst
Date
Administrator
Tuesday, January 11, 2022 11:07 AM



R9316P Frontier C97746 Tuesday, January 11 2022

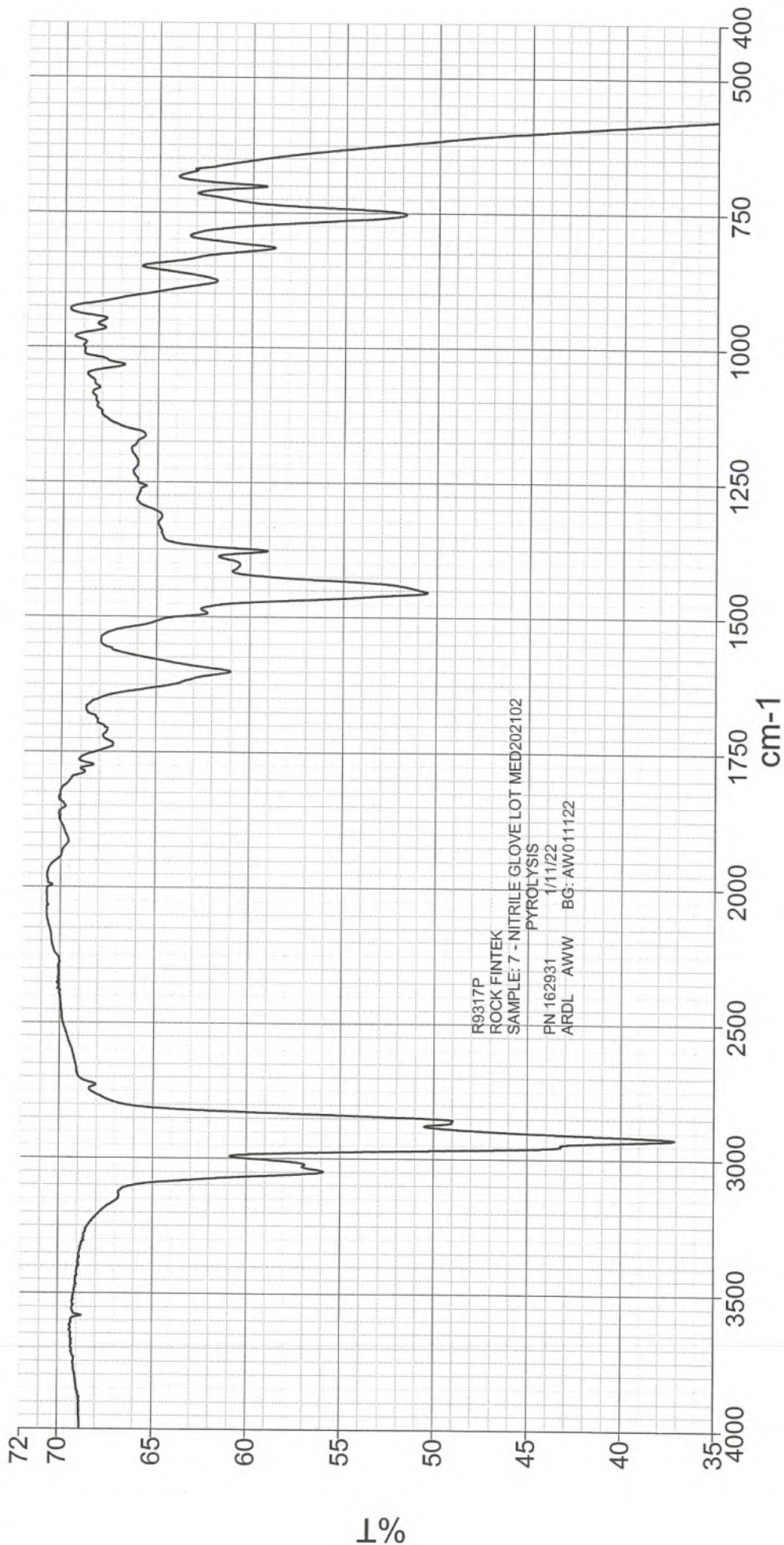
Analyst Administrator
Date Wednesday, January 12, 2022 11:26 AM



R9317HM Frontier C97746 Wednesday, January 12 2022

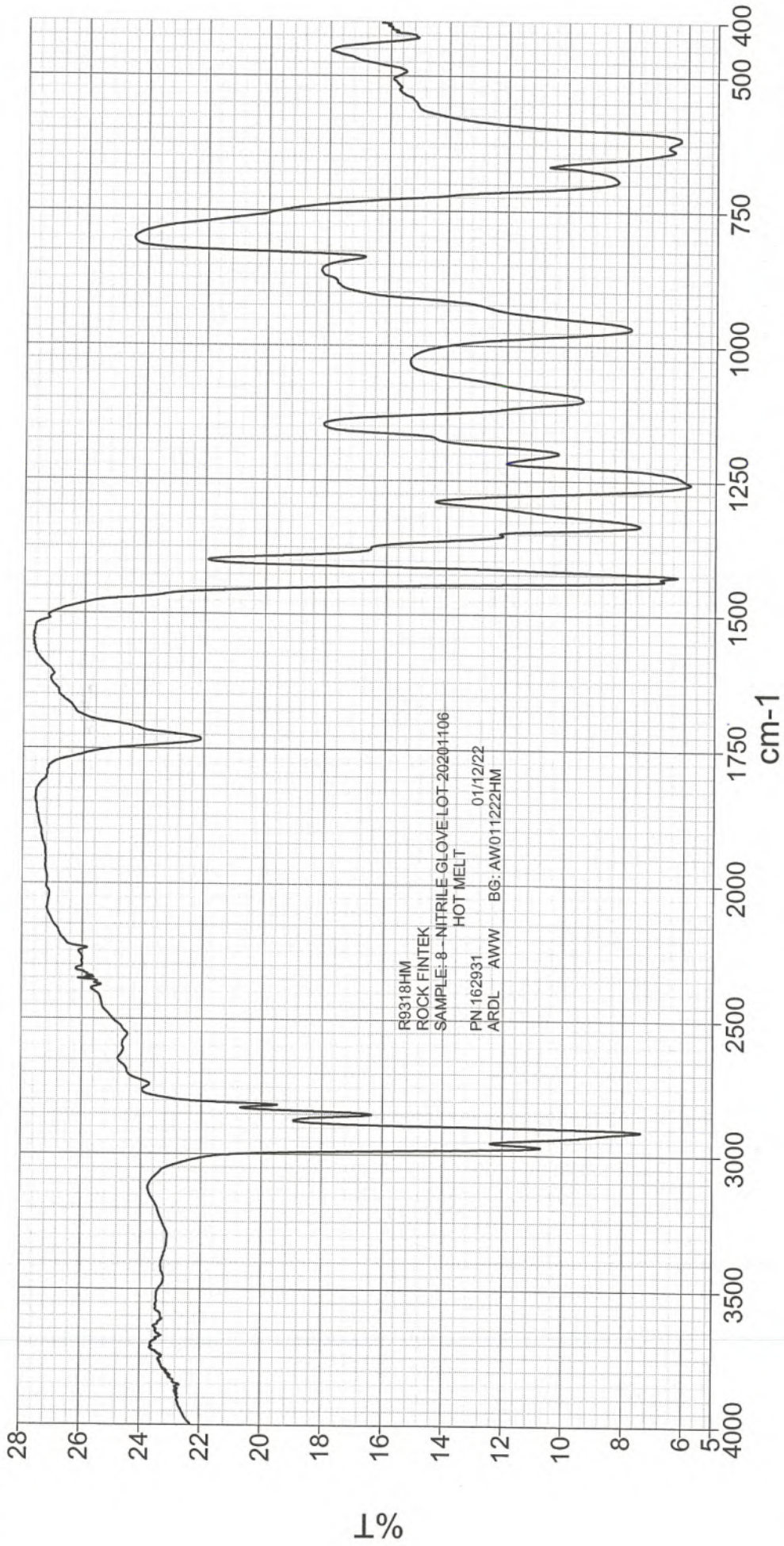
Analyst
Date

Administrator
Tuesday, January 11, 2022 11:19 AM



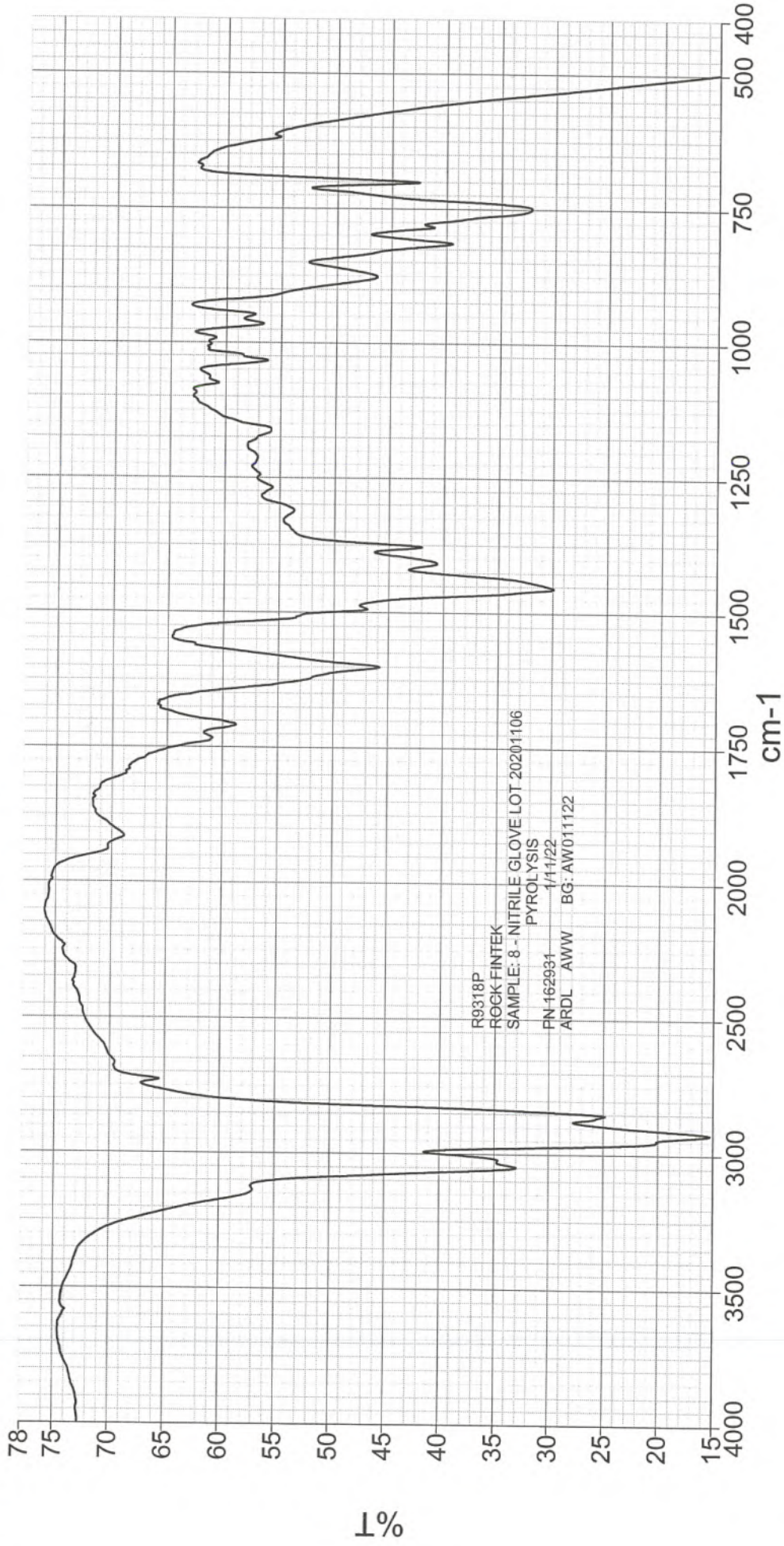
R9317P Frontier C97746 Tuesday, January 11 2022

Analyst Administrator
Date Wednesday, January 12, 2022 11:41 AM



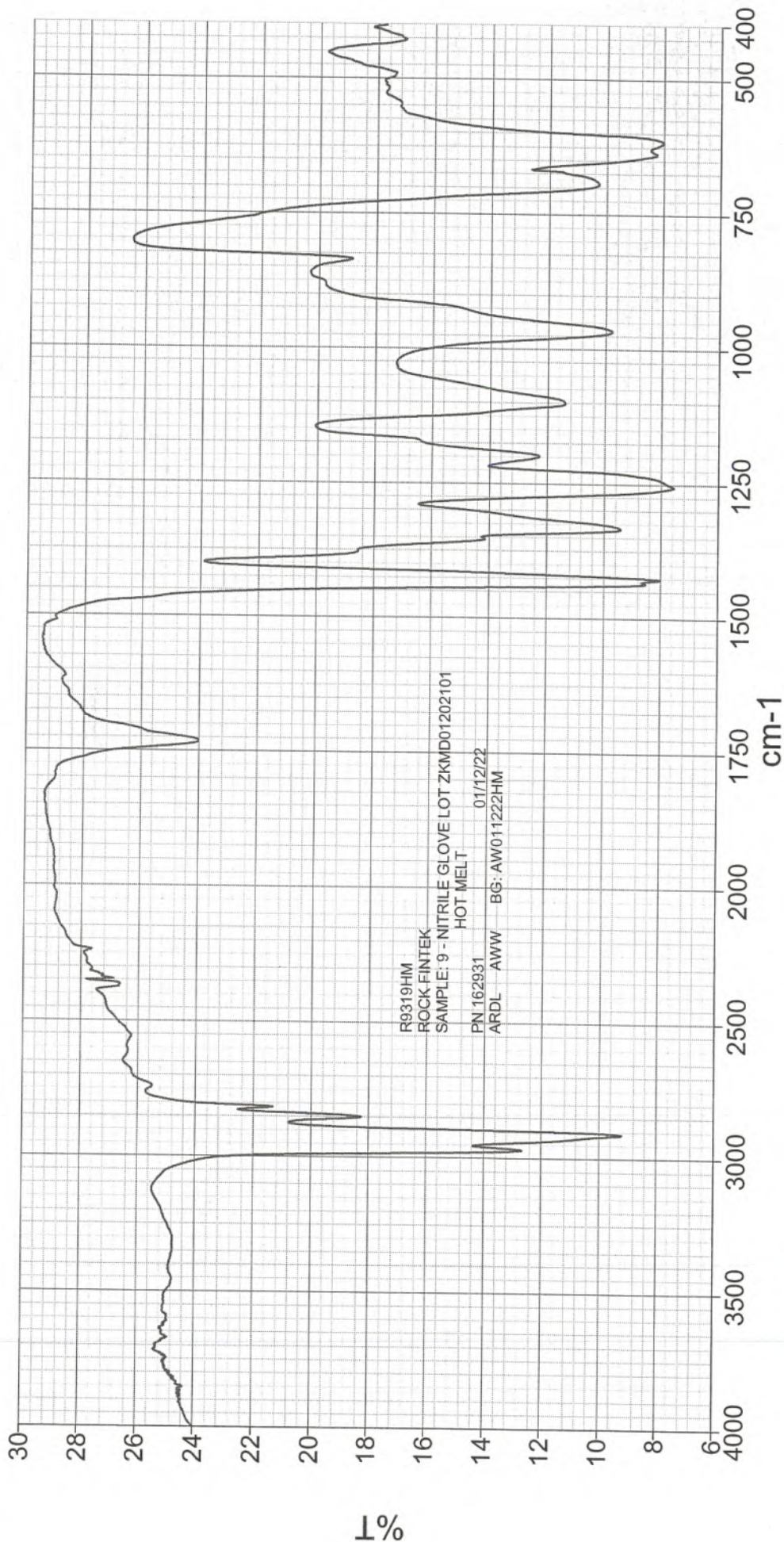
R9318HM Frontier C97746 Wednesday, January 12 2022

Analyst
Date
Administrator
Tuesday, January 11, 2022 11:41 AM



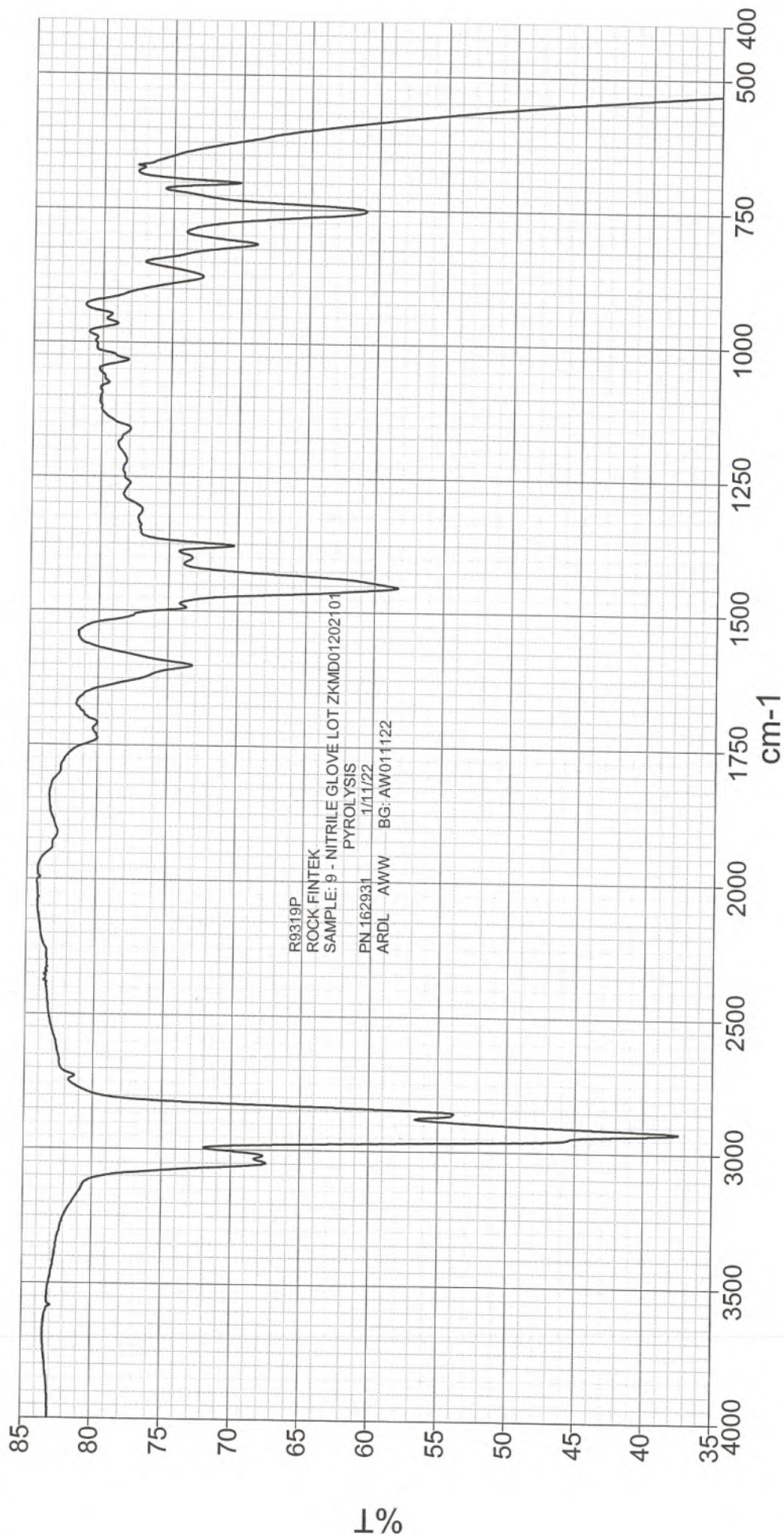
R9318P Frontier C97746 Tuesday, January 11 2022

Analyst Administrator
Date Wednesday, January 12, 2022 11:45 AM



R9319HM Frontier C97746 Wednesday, January 12 2022

Analyst
Date
Administrator
Tuesday, January 11, 2022 11:47 AM



R9319P Frontier C97746 Tuesday, January 11 2022



Testing. Development. Problem Solving.

April 19, 2022

▪TEST REPORT▪

PN 164005
CC Payment

CHEMICAL ANALYTICAL SERVICES

Prepared For:

Brad Gilling
Rock Fintek Trading Company
1680 Michigan Avenue Ste. 800
Miami Beach FL 33139

Prepared by:

W. Matthews Ruff
W. Matthews Ruff, Chemical Technician
Chemical/Analytical Services

Approved By:

Thomas D. Samples
Thomas D. Samples, Manager
Chemical/Analytical Services

Rev 110119



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Testing. Development. Problem Solving.

April 19, 2022
 Todd Jongen
 Rock Fintek Trading Company

Page 2 of 4
 PN 164005

SUBJECT: Analytical testing on samples submitted by above referenced company.

RECEIVED: Sample – MedCare Nitra Force NBR Nitrile Exam Gloves Lot ZKMD01202104 Size Large/8

TESTING: Testing performed at 2887 Gilchrist Road, Akron OH 44305

Decision Rule 1**POLYMER IDENTIFICATION: ASTM D3677**

Instrument: Perkin Elmer Frontier FT-IR Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Film, Pyrolysis

TABLE 1 – POLYMER IDENTIFICATION

SAMPLE ID	POLYMER
MedCare Nitra Force NBR Nitrile Exam Gloves Lot ZKMD01202104 Size Large/8	Acrylonitrile-Butadiene Rubber (NBR)

TOTAL NITROGEN; LECO METHOD[^]

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO_x. The NO_x gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO_x gas was measured by thermal conductivity and the final result was calculated by the LECO microprocessor as a weight percent of Nitrogen.

TABLE 2 – TOTAL NITROGEN

SAMPLE ID	TOTAL NITROGEN, %
MedCare Nitra Force NBR Nitrile Exam Gloves Lot ZKMD01202104 Size Large/8	6.47

Note: Results are an average of triplicate runs.

**ARDL is ISO 17025 accredited by A2LA for the test methods listed on the certificates referenced on page one. Unless specified, the current specification version is used.*

*NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report. **

April 19, 2022
Todd Jongen
Rock Fintek Trading Company

Page 3 of 4
PN 164005



Sample: One Box of MedCare Nitra Force NBR Nitrile Exam Gloves Lot ZKMD01202104 Size Large/8.

April 19, 2022
 Todd Jongen
 Rock Fintek Trading Company

Page 4 of 4
 PN 164005

Decision Rules

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state "Pass" or "Fail", based on those values only. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL's Scope of Accreditation.

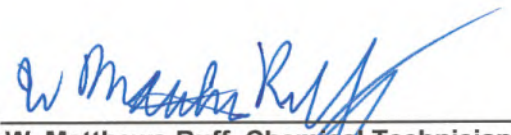
Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

<u>Date</u>	<u>Report Revision</u>	<u>Description</u>
4-19-22	New	

Prepared by:


W. Matthews Ruff, Chemical Technician
 Chemical/Analytical Services

Approved By:

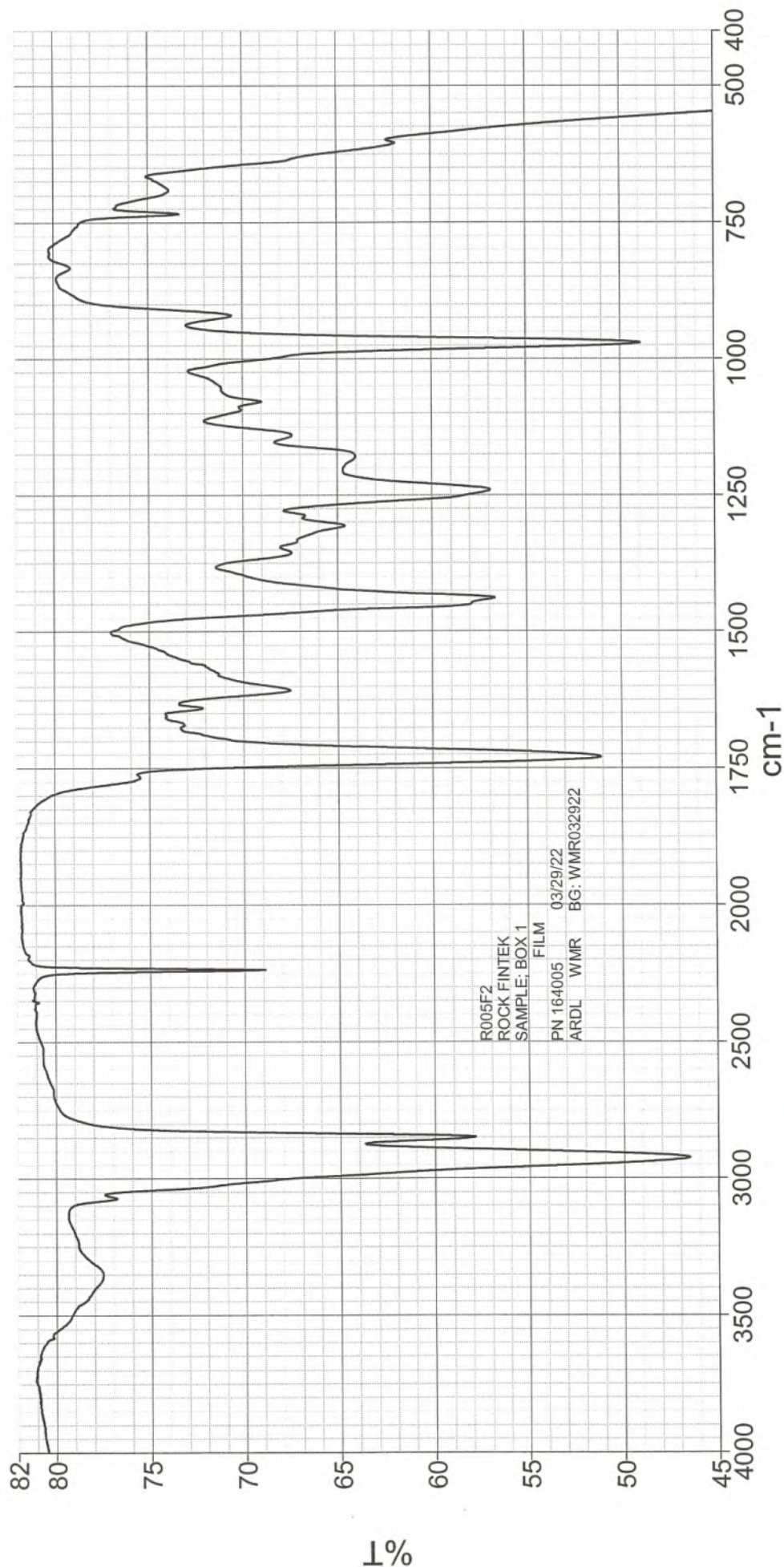

Thomas D. Samples, Manager
 Chemical/Analytical Services

WMR/TDS/tkr

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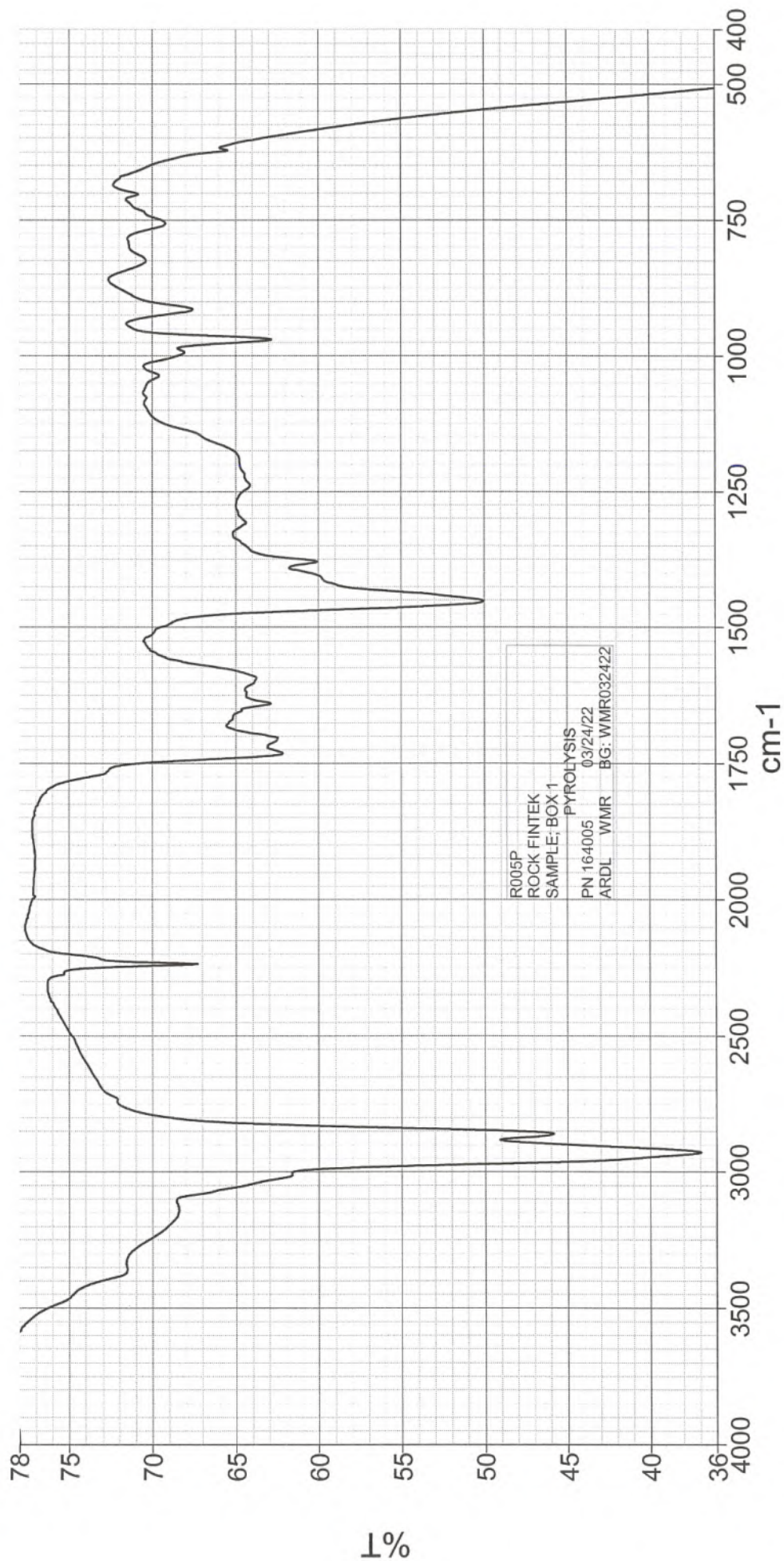
NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.*

Analyst Administrator
Date Tuesday, March 29, 2022 3:53 PM



R005F2 ROCK FINTEK FILM BOX 1 Tuesday, March 29 2022

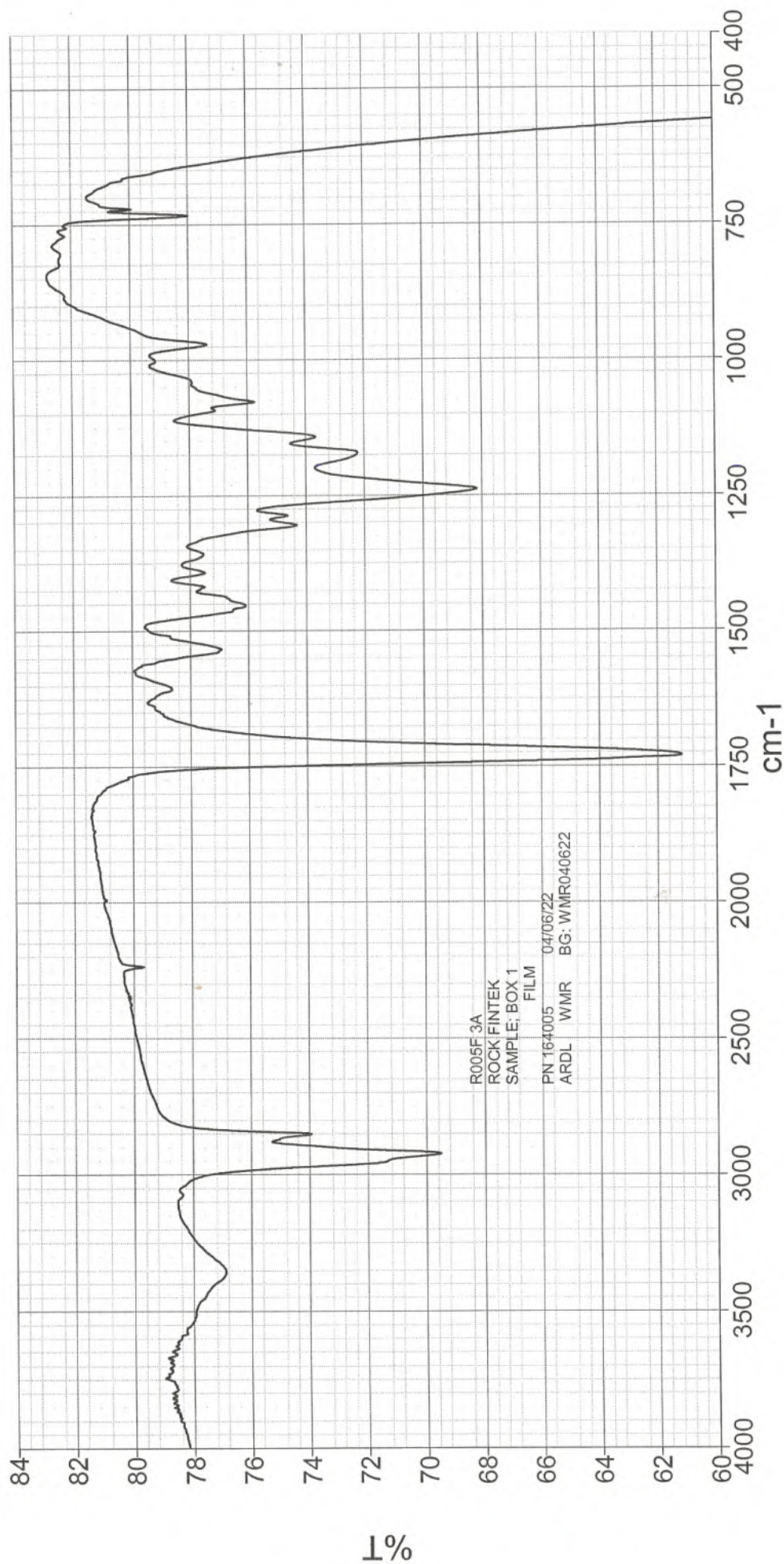
Analyst Administrator
Date Thursday, March 24, 2022 1:42 PM



R005P ROCK FINTEK PYROLYSIS BOX 1 Thursday, March 24 2022

Analyst
Date

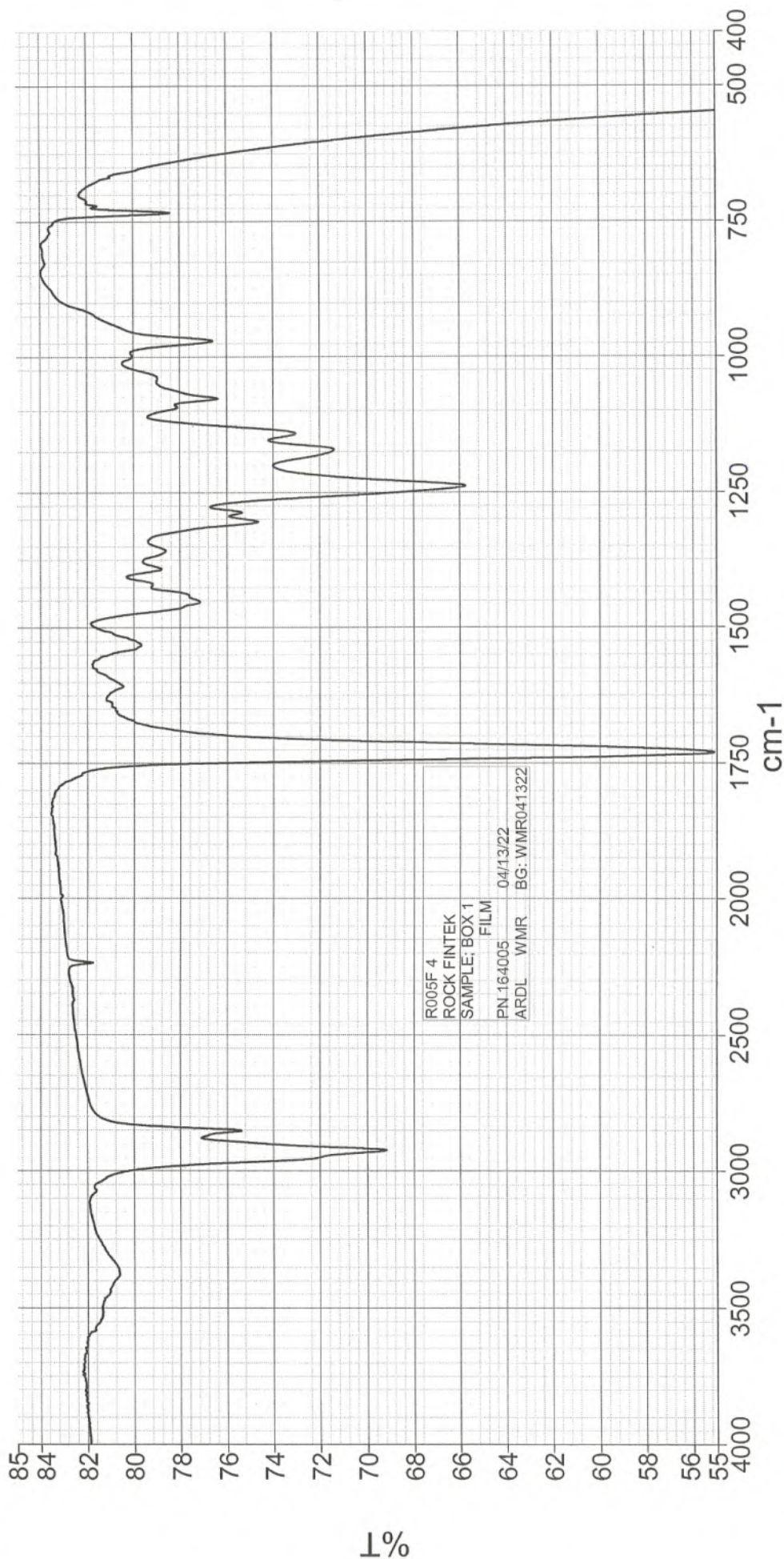
Administrator
Wednesday, April 06, 2022 1:13 PM



R005F 3A ROCK FINTECK FILM BOX 1 Wednesday, April 06 2022

Analyst
Date

Administrator
Wednesday, April 13, 2022 3:45 PM



R005F 4 ROCK FINTEK FILM BOX 1 Wednesday, April 13 2022

DRAFT**POLYMER IDENTIFICATION; ASTM D3677 OR ASTM E1252**

Instrument: Perkin Elmer Frontier FT-IR Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: **Film Pyrolysis** Hotmelt Extract KBr Pellet Neat
 OR Accessory: Universal ATR Autoimage

<u>SAMPLE</u>	<u>POLYMER</u>
Box 1	Acrylonitrile-Butadiene Rubber (NBR)

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO_x. The NO_x gas was swept through LECOSORB and anhydron to remove any other combustion products. The remaining NO_x gas was measured by thermal conductivity and the final result was calculated by the LECO microprocessor as a weight percent of Nitrogen.

<u>SAMPLE</u>	<u>TOTAL NITROGEN, %</u>
Box 1	6.47

Note: Results are an average of triplicate runs.

PN164005
 Rock Fintek
 4/14/2022
 W. Matthews Ruff



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December 3, 2021

▪TEST REPORT▪

PN 162399
Credit Card

CHEMICAL ANALYTICAL SERVICES

Prepared For:

Mike Elstro
Ascension Health Resource & Supply Management Group, LLC
2054 Westport Center Drive
St. Louis, MO 63146

Prepared by:

W. Matthews Ruff
W. Matthews Ruff Chemical Technician
Chemical/Analytical Services

Approved By:

Thomas D. Samples
Thomas D. Samples, Manager
Chemical/Analytical Services

Rev 110119



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ISO 9001-2015 Registered

ISO 9001:2015
Registered

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December 3, 2021
 Mike Elstro
 Ascension Health Resource & Supply Management Group, LLC

Page 2 of 5
 PN 162399

SUBJECT: Analytical testing on samples submitted by above referenced company.

RECEIVED: Sample – Three Lots of Gloves identified as Medcare Nitra Force Powder Free Synthetic Nitrile Protection Gloves Lot ZYMD01202103, MED202101 and HFK-202103010101.

Decision Rule 1

POLYMER IDENTIFICATION; ASTM E1252

Instrument: Perkin Elmer Frontier FT-IR Spectrometer
 Resolution: 4.0
 Number of Scans: 6
 Method of Preparation: Film, Pyrolysis

<u>SAMPLE ID</u>	<u>POLYMER</u>
Medcare Nitra Force HFK-202103010101	Polyvinyl Chloride
Medcare Nitra Force MED202101	Polyvinyl Chloride
Medcare Nitra Force ZYMD01202103	Acrylonitrile-Butadiene Rubber

TOTAL NITROGEN; LECO METHOD

The sample was combusted in an oxygen rich atmosphere where the resulting product is NO_x. The NO_x gas was swept through LECOSORB and anhydrous to remove any other combustion products. The remaining NO_x gas was measured by thermal conductivity and the final result was calculated by the LECO microprocessor as a weight percent of Nitrogen.

<u>SAMPLE ID</u>	<u>TOTAL NITROGEN, %</u>
Medcare Nitra Force HFK-202103010101	ND
Medcare Nitra Force MED202101	ND
Medcare Nitra Force ZYMD01202103	6.79

Note: Results are an average of triplicate runs.

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December 3, 2021
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Page 3 of 5
PN 162399

Medcare Nitra Force Gloves Lot HFK-202103010101



Medcare Nitra Force Gloves Lot MED202101



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Page 4 of 5
PN 162399

Medcare Nitra Force Gloves Lot ZYMD01202103



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Page 5 of 5
 PN 162399

Decision Rules

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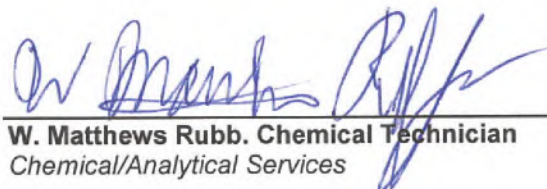
Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

<u>Date</u>	<u>Report Revision</u>	<u>Description</u>
12/3/21	New	

Prepared by:


W. Matthews Rubb, Chemical Technician
 Chemical/Analytical Services

Approved By:


Thomas D. Samples, Manager
 Chemical/Analytical Services

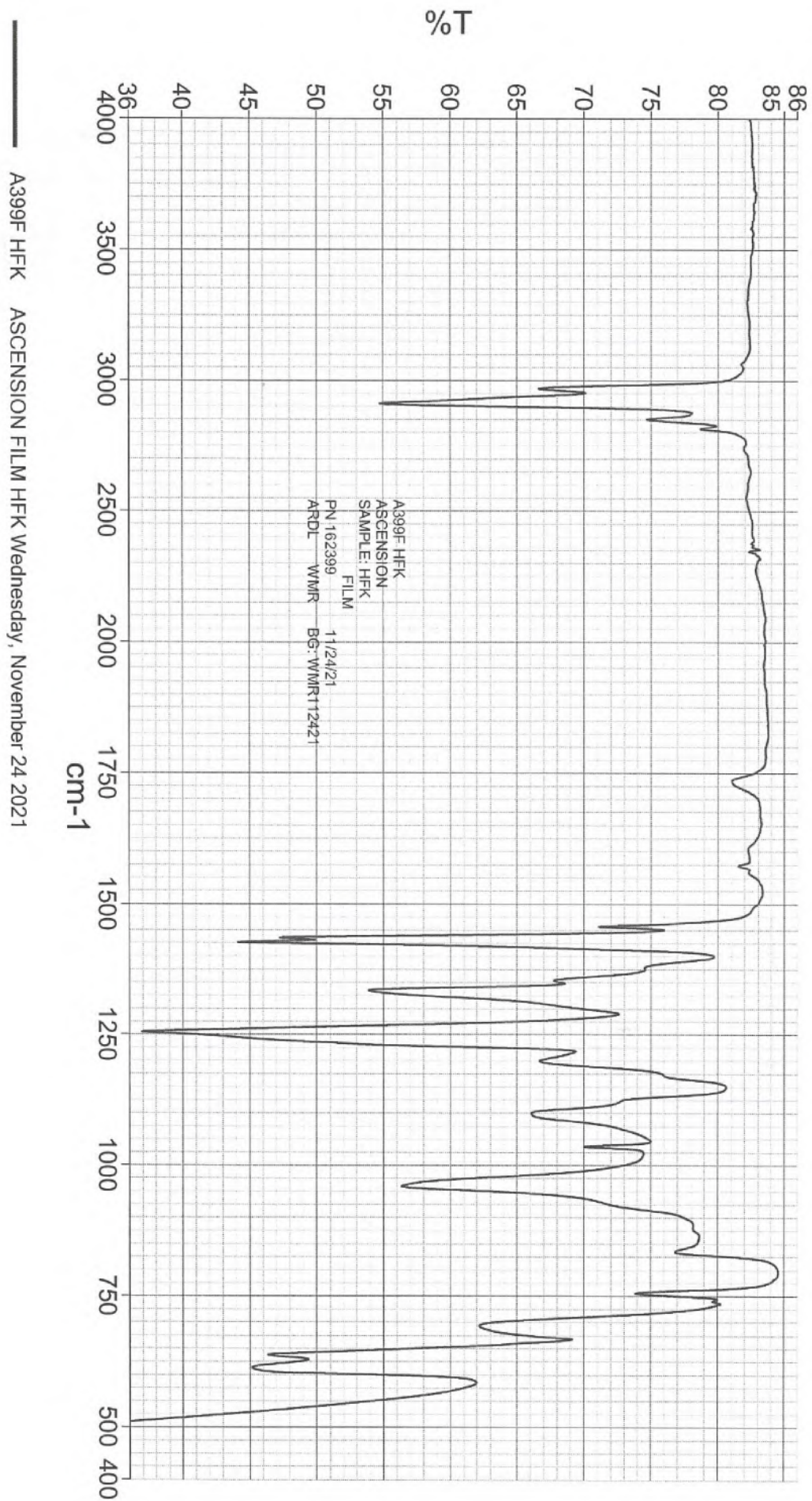
WMR/TDS/mak

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Analyst
Date

Administrator
Wednesday, November 24, 2021 12:19 PM

PerkinElmer Spectrum Version
Wednesday, November 24, 2021 12:

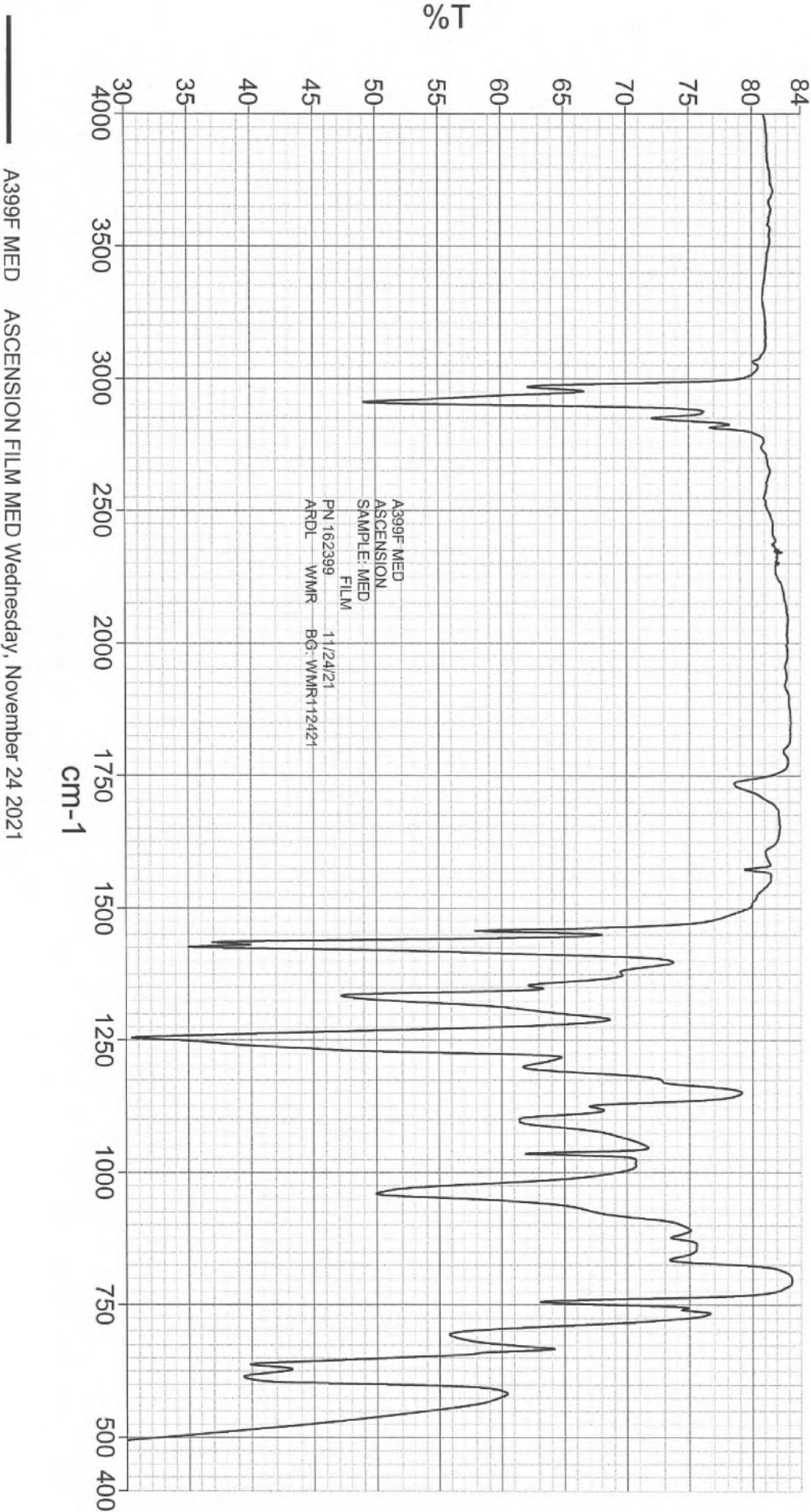


A399F HFK ASCENSION FILM HFK Wednesday, November 24 2021

Analyst
Date

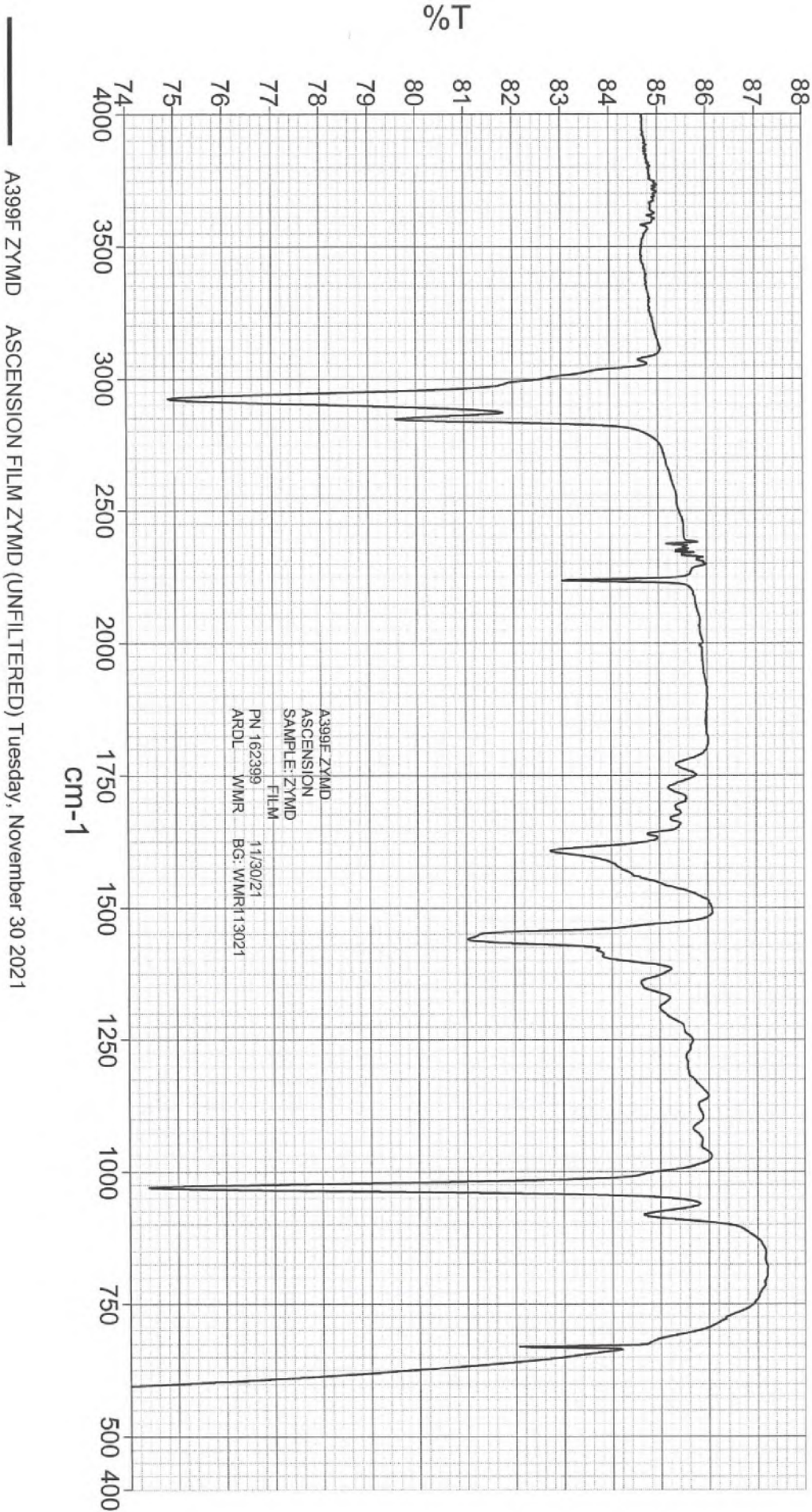
Administrator
Wednesday, November 24, 2021 12:21 PM

PerkinElmer Spectrum Version
Wednesday, November 24, 2021 12:



Analyst
Date
Administrator
Tuesday, November 30, 2021 4:03 PM

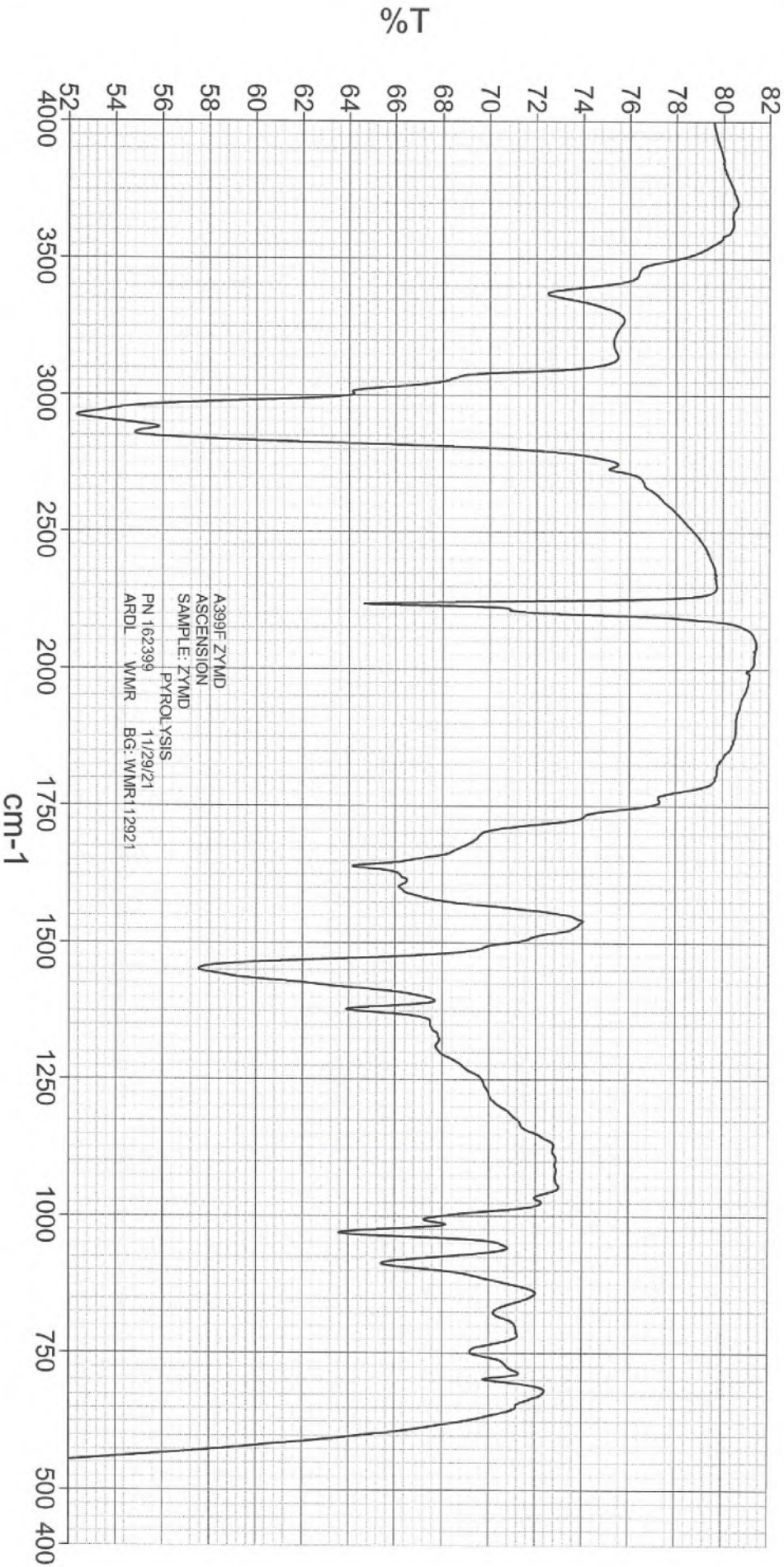
PerkinElmer Spectrum Version
Tuesday, November 30, 2021 4:



Analyst
Date

Administrator
Monday, November 29, 2021 5:04 PM

PerkinElmer Spectrum Version
Monday, November 29, 2021 5:



A399P ZYMD ASCENSION PYROLYSIS ZYMD Monday, November 29 2021

A399P ZYMD
ASCENSION
SAMPLE: ZYMD
PYROLYSIS
PN 162399 11/29/21
ARDL WMR BG: WMR 112921



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October 19, 2021

▪TEST REPORT▪

PN 161525
PO

PHYSICAL TESTING DEPARTMENT

Prepared For:

Mike Elstro
Ascension Health Resource & Supply Management Group, LLC
2054 Westport Center Drive
St. Louis, MO 63146

Prepared By:


Sandy Jones-Hamrick
Project Technician

Approved By:


Melissa Martin
Physical Testing Manager

Rev 110119



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Page 2 of 10
 PN 161525

SUBJECT: Physical Testing on material submitted by the above company.

RECEIVED: Eight lots of MedCare Nitrile Examination gloves identified as; Lot #ZKMD202104 MFTR Date 2021-04 Small, Lot #HFK-202103010101 MFTR Date 2021-04 Small, Lot #KFK-2021050102 MFTR Date 2021-05 Small, Lot #ZKMD01202101 MFTR Date 2021-01 Medium, Lot #MDE202011 MFTR Date 2020-12 Medium, Lot #MED202101 MFTR Date 2021-01 Small, Lot # MED202102 MFTR Date 2021-02 Medium and Lot #ZYMD01202103 MFTR Date 2021-07 Large.

DECISION RULE: Rule #1

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #HFK-2021050102

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	11.7	5.2	148	9.2	-
	20.6	8.7	368	8.2	17.0
	20.9	8.9	310	9.8	20.3
	22.5	9.7	382	8.8	17.7
	21.7	8.8	339	9.6	19.8
	20.9	8.4	349	9.0	18.4
	17.3	7.2	305	8.4	17.3
	20.0	8.0	313	9.5	19.4
	11.3	4.6	144	9.2	-
	21.3	8.0	322	9.9	20.1
	20.9	9.0	368	8.6	17.4
	19.5	8.1	290	10.0	-
	21.9	8.6	382	8.7	17.9
Median	20.9	8.4	322	9.2	18.1
Std. Deviation	3.7	1.5	78	0.6	1.2
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

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October 19, 2021
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Page 3 of 10
 PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #HFK-202103010101

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.0	8.8	286	10.2	-
	16.2	6.8	264	8.9	-
	13.7	6.1	212	8.5	-
	22.5	9.4	331	10.2	20.6
	17.6	8.0	315	8.4	16.8
	18.7	8.1	347	8.2	16.4
	16.7	7.2	307	7.9	16.3
	17.0	7.2	296	8.3	-
	18.2	8.0	311	8.4	17.7
	15.7	6.6	286	7.8	-
	15.0	5.9	261	8.2	-
	22.3	9.3	276	11.6	-
	13.0	5.7	213	8.0	-
Median	17.0	7.2	286	8.4	16.8
Std. Deviation	2.9	1.3	40.5	1.1	1.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

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Page 4 of 10
PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #MDE202011

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	18.4	7.1	258	10.4	-
	17.6	6.7	302	8.7	17.5
	17.2	7.1	301	8.5	17.0
	17.3	7.4	327	8.3	16.1
	12.0	4.6	194	8.1	-
	18.0	7.1	319	8.8	17.2
	13.2	5.4	240	7.9	-
	26.9	7.2	332	12.3	24.4
	16.6	6.7	305	8.2	16.3
	18.1	6.9	333	8.4	16.7
	17.3	7.0	315	8.3	16.6
	17.1	6.6	296	8.6	-
	7.8	3.2	83	5.8	-
Median	17.3	6.9	302	8.4	16.9
Std. Deviation	4.3	1.2	70.9	1.5	2.7
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

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Page 5 of 10
PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #ZKMD202104

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	16.3	10.2	312	7.4	15.6
	14.4	9.2	301	6.9	14.3
	13.1	7.9	250	7.3	-
	17.0	10.4	302	8.0	16.9
	13.3	8.3	275	6.8	-
	16.2	9.9	311	7.5	15.7
	15.3	10.3	318	6.9	14.5
	17.1	10.3	296	8.3	-
	13.2	9.1	252	7.1	-
	15.8	9.8	290	7.7	-
	10.3	6.1	140	8.5	-
	15.5	9.2	278	7.8	-
	14.8	8.5	263	7.8	-
Median	15.3	9.2	290	7.5	15.6
Std. Deviation	1.9	1.2	46.7	0.5	1.0
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

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October 19, 2021
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Page 6 of 10
 PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #MED202102

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.1	8.8	350	8.9	17.9
	20.3	8.4	331	9.7	18.7
	20.2	9.0	315	10.0	19.5
	20.1	9.4	308	10.2	19.6
	19.8	8.2	329	9.4	18.3
	18.1	7.7	296	9.4	-
	20.2	8.3	292	10.6	-
	20.5	8.7	338	9.5	18.3
	19.9	8.1	299	10.3	19.8
	19.8	8.4	320	9.6	18.7
	20.5	8.5	323	9.8	19.0
	18.1	7.7	304	9.2	17.9
	20.2	8.5	362	8.8	17.2
Median	20.1	8.4	320	9.6	18.7
Std. Deviation	0.8	0.4	21.1	0.6	0.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Pass	-	Fail	-	-

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October 19, 2021

Mike Elstro

Ascension Health Resource & Supply Management Group, LLC

Page 7 of 10

PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #ZYMD01202103

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	26.8	9.5	444	4.3	9.7
	30.3	10.2	449	4.5	10.3
	35.9	11.6	444	5.1	12.2
	9.3	3.1	255	4.8	-
	23.5	7.0	380	5.1	13.4
	40.3	13.9	449	4.6	12.1
	23.1	7.8	403	5.0	11.7
	20.1	6.7	632	5.2	13.8
	28.6	8.7	414	5.1	12.5
	27.1	9.0	417	4.8	11.4
	40.0	13.7	417	4.8	14.0
	10.0	3.3	261	5.0	-
	12.4	4.0	252	5.8	-
Median	26.8	8.7	414	5.0	12.2
Std. Deviation	10.3	3.5	76.2	0.4	1.4
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Fail	-	Fail	-	-

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October 19, 2021
Mike Elstro
Ascension Health Resource & Supply Management Group, LLC

Page 8 of 10
PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #ZKMD01202101

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	20.8	7.5	329	9.8	19.1
	21.5	8.2	322	10.1	20.2
	17.2	8.2	271	9.2	-
	19.5	7.5	279	10.1	-
	14.9	5.5	164	11.5	-
	14.7	5.5	232	8.8	-
	17.1	6.4	278	8.9	-
	21.4	8.0	301	10.7	21.2
	18.9	7.2	270	10.1	-
	19.4	7.2	311	9.4	18.8
	18.2	7.0	290	9.1	-
	20.6	7.7	302	10.2	20.4
	22.8	8.4	358	9.9	19.5
Median	19.4	7.2	290	9.9	19.8
Std. Deviation	2.5	0.9	48.0	0.8	0.9
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Pass	-	Fail	-	-

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*NOTE: Non-ISO 17025 accredited test methods are designated with the ^ symbol to differentiate from ISO 17025 accredited methods in the body of the test report.**

October 19, 2021
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 Ascension Health Resource & Supply Management Group, LLC

Page 9 of 10
 PN 161525

ORIGINAL PHYSICAL PROPERTIES, ASTM D 6319

Die C dumbbells tested at 20 in/min.

AQL 4.0

Accept 1

Reject 2

Lot #MED202101

	<u>Tensile Strength, MPa</u>	<u>Peak Force, N</u>	<u>Elongation, %</u>	<u>100% Modulus, MPa</u>	<u>300% Modulus, MPa</u>
	18.4	7.4	316	9.1	17.7
	19.4	7.6	329	9.0	17.8
	20.0	7.9	307	9.9	19.4
	18.4	7.6	326	8.7	17.2
	20.3	7.7	315	9.6	18.9
	18.4	7.1	283	9.7	-
	18.7	7.4	289	9.6	-
	18.6	7.5	282	9.9	-
	20.3	7.7	296	10.4	-
	18.8	7.6	293	9.7	-
	19.0	7.5	303	9.5	18.7
	11.8	4.2	129	10.3	-
Median	18.8	7.6	303	9.6	17.8
Std. Deviation	2.2	0.9	52	0.5	0.8
Requirements	14 min.	-	500 min.	-	-
Pass/Fail	Pass	-	Fail	-	-

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Page 10 of 10
 PN 161525

Decision Rules

Rule 1. This is the way test results have traditionally been reported by ARDL. If ARDL runs a test for you that has pass/fail requirements, ARDL will report the values observed and then state "Pass" or "Fail", based on those values only. By default, ARDL will apply this rule to all Category I tests and those tests which are not on ARDL's Scope of Accreditation.

Rule 2. This rule takes into account the calculated measurement uncertainty of test results generated. Every test and piece of test equipment has an inherent amount of measurement uncertainty associated with it. Rule 2 establishes "Guard Bands" where the measurement uncertainty value is added to the Minimum Passing requirement and is subtracted from the Maximum Passing requirement. The Pass/Fail requirements thus become tighter and customers may be more "Certain" of their Pass/Fail result.

Rule 3. This rule also takes into account measurement uncertainty but does not set up guard bands. Rule 3 may be used when values are reported, but there is no Pass/Fail requirement called out in the test specification. Rule 3 simply states that the measurement uncertainty is reported to the customer, along with the testing result generated, and the customer decides if the results are suitable for their purposes.

Report Revision Log

<u>Date</u>	<u>Report Revision</u>	<u>Description</u>
10-19-21	New	

Prepared By:



Sandy Jones-Hamrick
 Project Technician

Approved By:



Melissa Martin
 Physical Testing Manager

sc

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